

WAIT to Curtin

**A History of the Western Australian
Institute of Technology**

Michael White

PARADIGM BOOKS
Curtin University

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Foreword

By Sir Charles Court, A.K., K.C.M.G., O.B.E.

A proper appreciation of the history of the Western Australian Institute of Technology (WAIT), now Curtin University of Technology, is impossible without a clear understanding of the Western Australian scene leading up to the establishment of WAIT in 1967 and the twenty years that followed.

Michael White is to be congratulated on what he has brought together in *WAIT to Curtin*. It was a daunting task. He has wisely allowed the problems and crises to come through, and still allow the many successes to shine out.

Western Australia was no ordinary State. At the time, there was a comparatively small population in a vast State, with most of the people concentrated around the metropolitan area of Perth. Western Australia was a mendicant State operating under the Commonwealth Grants Commission. It was regarded by the Eastern States and Canberra as remote and something of a poor relation—nice to know as long as there were no embarrassing demands.

In 1959, when a new government brought a commitment to convert potential into reality, there were only about 700,000 in a State which covered a third of Australia's land mass. You could either grin and bear it and be condemned to mediocrity and mendicancy, or seek to change the whole scene. Some opted for dramatic change.

One who understood the exciting prospects of a changed political and economic philosophy was Dr Thomas Logan ('Blue') Robertson, director (later director-general) of education in Western Australia. The significance of his role must not be overlooked by today's generation of educators, because Australia has only scratched the surface of its potential if we have the vision and bold imaginative leadership.

Dr Robertson was full of praise for, and of confidence in, those who had laboured long and hard over more than twenty years to explore and nurture professional level courses within technical education, with the objective of

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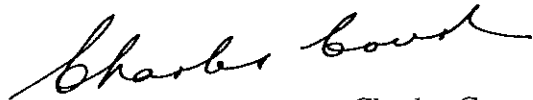
proceeding to an institute of technology. Foremost in the Technical Education Division were successively Leslie William Phillips, William George Hayman and Dr Haydn Williams, and in the Perth Technical College, Ray Davis and Leslie Hollis. When the time came, Dr Robertson saw Haydn Williams as the one to lead the charge to establish and develop WAIT.

Others followed in significant leadership positions including the dynamic Dr Don Watts. But nothing should detract from the initiatives that worked their way through the difficult years and circumstances in technical education leading up to WAIT, and the exciting years thereafter in which it became widely recognised nationally and internationally as a leading institution of its kind.

I hope the current thrust throughout Australia towards uniformity, central planning and policy-making is not allowed to destroy the initiatives and spirit of adventure needed to meet special and changing Western Australian conditions. Likewise, I hope those responsible for the future of Curtin University of Technology are never too proud to understand and appreciate why and how WAIT came into existence, at a time when unusual circumstances needed unusual treatment, or to fully acknowledge how much it contributed to the establishment of the university.

It was a classic example of dedicated educationists realising the role they could play in the total scene and then doing something about it. In this they had the support of the State government committing itself in 1963 to begin the development of WAIT as the first new major institution of its kind in Australia. The result was that when the Commonwealth entered this field some two years later, WAIT was well positioned to gain maximum benefit from these changed circumstances in which funds were first directed to those institutions in the position to make immediate use of them.

I unhesitatingly commend this very readable, stimulating and insightful history to all those engaged in or with a serious interest in higher education.

A handwritten signature in cursive script, reading "Charles Court". The signature is written in dark ink and is positioned above the printed name.

Charles Court

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Overlay: New logo of Curtin University of Technology.

The publishers acknowledge the work of photographer Pat Strange, which provided most of the illustrations covering the 1980s period of the book. Ed Bennett and Hans Versluis, of Curtin University of Technology's Teaching Learning Group, also contributed greatly by re-photographing many of the graphics which appear in the book.

Preface

An early decision taken by the history committee established to oversee the Western Australian Institute of Technology (WAIT) history project, was that it should be left in the hands of a single author. The interpretation presented here is the outcome of the author's research alone and there has been no attempt to 'dress' the account for public consumption. Accordingly, while the volume commemorates a significant phase in the development of WAIT, the intention throughout has been to present an account that corresponds as closely as possible to the realities of WAIT's development.

Nobody attempting such a task can claim omniscience or avoid the inevitable filtering processes imposed by the need to select particular ideas, events and forces as more important than others. In any event, much of WAIT's development has been controversial enough to render difficult indeed the presentation of an account of its history that will satisfy every reader. Clashes of personalities, policies and institutional missions, not to mention sheer bloody-minded self-interest on the part of institutions and agencies concerned (including WAIT itself), will mean that interpretation of especially controversial features of WAIT's development is an extremely hazardous undertaking. The predicament is compounded by the fact that most of the events described occurred within the lifetime of the people and organisations whose interests have been intimately involved in WAIT's development, as either protagonists or antagonists.

My account of the history of WAIT builds on a base of extended study of post-secondary education in Western Australia, dating back to a doctoral thesis on higher education, presented at the University of Western Australia in 1968. This subsequently was broadened by studies of public examinations, the Western Australian School of Mines, agricultural education, technical and further education and nurse education, undertaken while I was a staff member

at the University of Queensland and, later, Murdoch University. At the time I joined WAIT in 1981 I completed a major historical study of post-school education in Western Australia. This study of WAIT is, therefore, set within the context of a wide familiarity with the historical development of post-school institutions in Western Australia.

WAIT emerged as an institution originally forming part of the State's technical education system, and then absorbed as branches several other smaller colleges. This meant that much of its early history required detailed study of the records of the State government departments concerned and of the institutions themselves, for example the Perth Technical College. In this respect, over a period of thirty years I have enjoyed privileged access to filed correspondence in the various departments and institutions. Although much of this is now available in the Batty Library (State Archives), the relevant ministers and departments have also been extraordinarily open in allowing me access to policy files that are more current.

I have also been able to conduct interviews with most of the key people involved in WAIT's development from its earliest days. These have included frank and open discussions with such people as Sir Charles Court and a number of ministers for education, as well as WAIT's first two directors Dr Haydn Stanley Williams and Dr Don Watts. Where leading figures in the Education Department and WAIT are concerned, I have been able to speak to almost all the key people involved, and indeed to build up an important archival resource for future use. Special mention is made here of the diary records of Sir Ian Wark, held in the Australian Academy of Science. Extensive reference also has been made to the reports of the major Commonwealth bodies and committees associated with post-secondary education, as well as of the Western Australian Tertiary Education Commission and its successor, the Western Australian Post-Secondary Education Commission.

As for WAIT itself, research for the present work has involved extensive reading of the annual reports of the institution and its constituent departments, schools and branches. Detailed examination has been undertaken of the minutes of peak committees: the WAIT Council, the Institute Resources Board and its predecessors, and the Academic Board. With the help of Curtin University of Technology's records section, I have also made a detailed study of the filed correspondence and other material available in the institution. Extensive use has been made of official publications of WAIT and Curtin University of Technology. This written record has been complemented by recorded interviews with a broad cross-section of associate directors, heads of schools and departments, and other staff. Research assistant Terry Craig compiled a detailed account of the development of the Student Guild, based on written records and interviews with every president since 1968. He also compiled useful information on the Academic Staff Association and on many other aspects of WAIT's development.

M.W.

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The preparation and publication of this history of WAIT was made possible by the Council of Curtin University of Technology. Its members set aside the funds for the research and writing, which was overseen by a WAIT history committee chaired by Dr Peter Reeves. As the author chosen to prepare the history, I am indebted to both the council and Peter Reeves, whose advice and support have been greatly appreciated.

Within Curtin University, I am deeply grateful for the quite extraordinary level of support and personal assistance I have received from academic, administrative and clerical staff at all levels. There are too many people for them to be named individually. However, I cannot let the moment pass without mentioning the wonderful help extended by Sadic Pattenden and the records staff, whose fortress I invaded for some two years without seemingly to incur the slightest ill-will. Their encyclopaedic knowledge of WAIT's records was essential to the present work. Dorothy Robson also has been a tower of strength in pointing me towards records of the university's major committees.

Since WAIT developed out of institutions controlled originally by several State government departments, their co-operation in gaining access to filed correspondence and other material was essential to the research underpinning the book. It gives me great pleasure to place on record their unstinting efforts to assist me in this regard. With their approval, I received virtually unrestricted access to files of the State Treasury, the Department of Education, the Department of Agriculture, the Mines Department, the Department of Public Health, the Department of Premier and Cabinet, the Building Management Authority and the Town Planning Commission. My personal thanks go too, to Dr Bill Pullman, formerly chairperson of the Western Australian Post-Secondary Education Commission (WAPSEC), for giving me access to WAPSEC records.

Acknowledgements

I am further indebted to the many individuals who assisted me in the collection of interview material. In particular, I must express my gratitude to Sir Charles Court, Graham MacKinnon, Peter Jones, Robert Pearce and Norman Moore, all of whom provided detailed and frank assessments of the political dimensions to WAIT's development. Sir Charles showed continuing interest in the book throughout its preparatory stages. Practically all the inaugural deans and heads of departments, some now deceased, and senior people in the Curtin University administration were equally open and frank in discussing their perspectives about the developments at WAIT. Dr John de Laeter kindly read and criticised early drafts, as did Peter Reeves, the late Dr Norman Dufty and Bill Cooper. I nevertheless accept responsibility for the final product, which is my own interpretation of the flow of events at Bentley.

Very special acknowledgement must be made to Dr Haydn Williams and Dr Don Watts, WAIT's first two directors, who have spoken with me on several occasions and read early drafts of the book dealing with their periods of office. Haydn Williams has been a mentor and friend ever since I commenced working on the history of technical education in Western Australia. Don Watts was not only a dynamic leader, but a person who showed me particular kindness that will be long remembered.

Finally, I have a very special duty to record my appreciation to Susan Green, whose editing of the manuscript was quite exceptional.

Explanatory Notes and Abbreviations

Throughout the book the practice has been adopted of calling government appointed committees by the name of the committee chairperson, which appears in parenthesis after first mention of the committee by its full title.

When the Australian currency was decimalised in 1966, the Australian pound (£) was converted at the rate of \$2.00AUD. Based on the historical Consumer Price Index, the value of \$1.00 in 1966 was equivalent to \$7.57 in 1995.

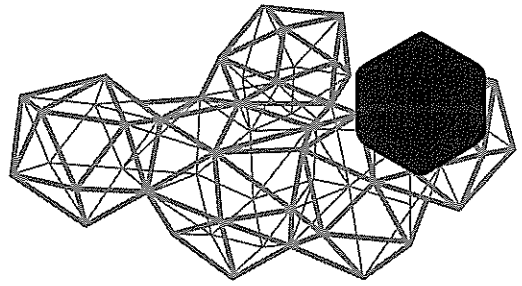
Reference is made in the text to the imperial measure 'acre', which converts to 0.405 hectare in metric.

The following abbreviations have been used in the text:

ABC	Australian Broadcasting Commission
ACDP	Australian Conference of Directors and Principals
AGM	Annual General Meeting
AMDEL	Australian Mineral Development Laboratories
ARC	Australian Research Council
ARGC	Australian Research Grants Committee
ARGS	Australian Research Grants Scheme
ASA	Academic Staff Association
AUD	Australian dollar
BBC	British Broadcasting Corporation
BHP	Broken Hill Proprietary Co. Ltd
CACAE	Commonwealth Advisory Committee on Advanced Education
CAE	College of Advanced Education
CBE	Commander of the Order of the British Empire
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CTEC	Commonwealth Tertiary Education Commission
CUT	Curtin University of Technology

Explanatory Notes and Abbreviations

DOCIT	Directors of Central Institutes of Technology
FTES	Full-time equivalent students
FTS	Full-time students
MA	Master of Arts
MBA	Master of Business Administration
MEd	Master of Education
MSc	Master of Science
NSWIT	New South Wales Institute of Technology
OBE	Officer of the Order of the British Empire
OECD	Organisation for Economic Co-operation and Development
PhD	Doctor of Philosophy
PLO	Palestinian Liberation Organisation
QIT	Queensland Institute of Technology
QUT	Queensland University of Technology
REDS	Regional Employment Development Scheme
RMIT	Royal Melbourne Institute of Technology
SAIT	South Australian Institute of Technology
TAFE	Technical and Further Education
TEASA	Tertiary Education Academic Staff Association
UDC	Universal Decimal Classification
UG	Undergraduate
UNESCO	United Nations Educational Scientific and Cultural Organisation
UTS	University of Technology, Sydney
UWA	University of Western Australia
WA	Western Australia
WACAE	Western Australian College of Advanced Education
WAIT	Western Australian Institute of Technology
WAMPRI	Western Australian Mining and Petroleum Research Institute
WAPSEC	Western Australian Post-Secondary Education Commission
WATEC	Western Australian Tertiary Education Commission



An Overview and Introduction

In (January 1987) the Western Australian Institute of Technology (WAIT) was formally renamed Curtin University of Technology. (The occasion signalled the end of twenty years of development at the institute and the beginning of a period of remarkable change in not only the new university, but more particularly the Australian system of higher education). WAIT's first twenty years had coincided with the establishment, consolidation and eventual transformation of what, under the Australian binary concept of higher education, was known as the advanced education sector.

In many ways WAIT, which had been established in 1966, was the quintessential college of advanced education (CAE). It had been created as a new institution with an educational mission that represented in the most comprehensive manner the philosophy of advanced education framed in Commonwealth government policy, after the Martin and Wark reports of 1965 and 1967 respectively. WAIT's history indeed paralleled and, in important ways, contributed to the history of Australia's endeavour to create an alternative system of higher education, complementing yet different from that provided in universities.

In considering WAIT's development up to 1987, when it was redesignated Curtin University of Technology, there are a number of strands that warrant special emphasis in the present volume. They include the national standing of its first two directors and the first chairperson of its governing body, the WAIT Council; and the fact that the institution was originally planned and funded as a State initiative before the advent of Commonwealth involvement in advanced education. These elements contributed to other special features: the building of WAIT's fortunes on a base established in the State's system of technical education; the very comprehensiveness of WAIT as an Institute of Technology framed within an intentionally broad, if controversial, understanding of the

meaning of 'technology'; a dedication to planning and efficient administration; and the State-wide spread of WAIT's educational responsibilities.

Those features, in turn, enabled WAIT to grow quickly into one of the two or three largest institutes in the nation and establish distinctive areas of leadership in Australia's system of advanced education. Controversial this may have been and subject to substantial opposition, but it remains true that WAIT became something of a national standard-bearer in what proved to be the demise of the binary system of higher education in Australia. That event, for good or evil, emerged from challenges by WAIT (under its second director Dr Don Watts) and other similar institutes to national constraints on research and development and to the limited funding base in CAEs.

On the matter of leadership it was perhaps extraordinary that WAIT, located in the most isolated State capital in Australia, should have enjoyed leadership from individuals who assumed such national prominence. (Dr Thomas Logan ('Blue') Robertson, one of the most influential of Australia's post-war directors of State education, played a unique role with respect to both WAIT and the Canberra CAE. (His contribution to Australian higher education was cut short by his untimely death in 1969.) At the political level WAIT also owes much to the energy of former government minister and then premier (later Sir) Charles Court who, once he was convinced by Robertson, vigorously supported the project in State Cabinet.

WAIT's first director, Dr Haydn Stanley Williams, not only masterminded with Robertson the building of WAIT itself, but also was a leading spokesperson for technical education in the Australian community before the advent of Commonwealth financial involvement. Appointed to the inaugural membership of the Commonwealth Advisory Committee on Advanced Education (CACAE—Wark), he was one of several national figures giving substance to the philosophy of advanced education through the Wark committee; and afterwards through the Australian Council on Awards in Advanced Education and the Directors of Central Institutes of Technology (DOCIT) conference.

Williams' successor, Dr Don Watts, continued the dynamism he had generated, carrying WAIT to the forefront of Australia's CAEs involved in research and development and entrepreneurial ventures. It is not overstating the case to describe Watts as one of the most influential leaders of Australian higher education of the 1980s. Much of his vision for Australian higher education, albeit one surrounded in controversy, infiltrated reform policies of the Hawke Labor Government.

(WAIT enjoyed one special advantage over most similar institutions in Australia, having been planned from the outset as an institution occupying a new and spacious site, housed in purpose-built accommodation according to a well-developed policy framework and architectural design.) Due to the foresight of Robertson, Court and Williams, a start had been made under Premier (later Sir) David Brand's Liberal-Country Party Coalition Government before Commonwealth commitments to funding assistance and the idea of

advanced education materialised. WAIT made a clean start too, on governance and staffing appointments, with a clarity of purpose that paved the way for remarkable growth in its first ten years.

(WAIT's greatest asset in the first ten years of its establishment was the existence of coherent developmental plans accompanied by architectural designs ready for implementation whenever money was available.) Building programmes, financial operations and statistical services were marked by a sophistication that set WAIT well in advance of most other Australian institutions at the time. The genius of the institution's first administrative secretary, Howard William Peters, and his team, nevertheless coincided with a relatively weak academic voice in WAIT's early development, even though Williams maintained an extensive consultative process throughout the institute's decision-making systems. Significantly WAIT was started as an institution under strong leadership from its director, assistant directors and departmental heads, and largely remained so throughout its history.

Organisational structures at WAIT in its earliest days tended to foster institutional cultures built around separate academic divisions. These persisted in spite of concerted efforts to generate participation in 'the WAIT community' and to give substance to the idea of 'liberal' education. WAIT's heavy vocational bias restricted achievement of the sort of interdisciplinary goals underpinning much of the academic policy endorsed in principle across the institution. A major restructuring of WAIT in the 1980s, if anything, consolidated the concentration of staff and student life at WAIT (and later Curtin University) around the academic foci of the institution's four big divisions.

(WAIT's planning and organisational structures nevertheless were central to its success in coping with a dramatic growth in enrolments and programmes in its first ten years. Student numbers, approximately 2,000 in 1967 when WAIT opened, reached 10,000 in 1975.) During the same period, a brand new campus was brought into being in a frenetic burst of building and grounds development which only slowed in the late 1970s. Such growth undoubtedly created impressive challenges and was pivotal to some of the criticism raised during the late 1970s.

Dr Haydn Stanley Williams once described WAIT as simply a new stage in the continuous development of technical education, not as representing a break with that continuity. In so far as WAIT built upon a base of tertiary studies in the Perth Technical College and other technical institutions, and of academic personnel largely recruited from the technical education system, his observation is valid but only to a point, since a clear break from that system was intended.

It took some years for WAIT to shake clear of public preconceptions about the role and standing of technical education, and indeed to be infused with a culture more befitting higher education. That process was made easier by virtue of an entirely different governance system from that in technical education, with staff recruitment on the open market and an entrepreneurial

vigour in dealings with the community and industry. Occupation of a new campus and especially commissioned buildings also enabled WAIT eventually to escape identification with the miserly tradition that historically had deprived technical education of any real standing in the Australian community. In the case of WAIT, that transformation was virtually complete by about 1972 when engineering began to move from the old Perth Technical College.

Institutional life at WAIT and Curtin University has inevitably shifted far from that applying when the institution first commenced functioning at Bentley. At that time the heavy bias towards part-time and external male students and vocational courses deprived the campus of an extra-curricular cultural life based on vigorous student participation. Williams and the first WAIT staff, however, actively promoted the Student Guild and student representation across WAIT's committee structure. It was indeed fortunate that the School of Art and Design and the social science departments were able to bring a semblance of cultural breadth into what otherwise might have been an extremely 'grey' institution, matching perhaps the stark ambience of the original architectural concept. Even in the late 1980s, residential life on the campus at Bentley appeared to lack the intellectual stimulus of the college and 'residential hall' culture associated with most universities. The institution nevertheless is changing as it matures and it enjoys one particular advantage: the proportion of overseas, mainly Asian, students who impart an important cultural diversity to campus life at Bentley. WAIT, and now Curtin University, can also boast a substantial body of graduates in Southeast Asia who have valued their experience in Australia.

WAIT not only became a large institution, it was perhaps Australia's most comprehensive CAE. The vision of Robertson and Williams of an applied institution where professions based in the humanities and social sciences would share priority with the more traditional science- and technology-based professions, drew on historic traditions in technical education that have always been controversial. The outcome was the formation of one of Australia's least 'technological' institutes of technology, though one with a firm base in the applied sciences and engineering.

Much of the public controversy surrounding WAIT's development has focused on its functions in business, art, the humanities and the social science-based occupations. These criticisms found vigorous adherents even within WAIT itself, but were especially associated with important State government inquiries (the Partridge and Birt inquiries) into post-secondary education in Western Australia in the 1970s.

WAIT's growth in the early 1970s was partly related too, to the absorption of other institutions: the Western Australian School of Mines at Kalgoorlie, the Muresk Agricultural College and two therapy schools. The fact that WAIT was coextensive with the system of advanced education in the State, at least until teachers' colleges formed part of that system, differentiated WAIT's development from that of similar institutions in other States. The demography of Western Australia, of course, provided justification for State government

actions in linking these smaller institutions to WAIT. It made sense to concentrate resources in the State in a way that would also boost academic strength in what otherwise would have been tiny and peripheral colleges. In other States, population distributions were more conducive to setting up independent institutions in regional centres or in specialist, discipline-based colleges, for example in art or in the health sciences. Moreover, regional colleges in other States could become the focus of external study in ways that could not be justified in Western Australia.

Regarding the branch colleges the absorption of the two therapy schools was a major success story in the 1970s. The merger of Muresk Agricultural College with WAIT also was largely successful, although not without its critics. The joining of WAIT and the Western Australian School of Mines perhaps promised more than could be delivered. For WAIT the problems were largely financial in that governments never recognised the unavoidably higher costs incurred in running small branches in isolated environments. The School of Mines at Kalgoorlie undoubtedly benefited from academic connections to WAIT (in fact would not have survived without them), but its role within the structure of WAIT was the source of endless controversy. Much of that may have been avoided had governments accepted the financial implications of political decisions to maintain the School of Mines at Kalgoorlie in deference to decentralisation, and social and industrial considerations. While such concerns are extremely important in terms of overall State policy, and also for the goldfields region generally, the financial burden for WAIT has never been fully resolved. WAIT has attracted undeserved criticism from the region, where the financial blame has been mostly ill-directed. Until governments accept the financial consequences of their decisions, regional branches will inevitably struggle to achieve the unrealistic ambitions held out for them.

A lingering question remains to be answered concerning State government decisions to establish Murdoch University as a separate institution in 1973, rather than to create a second university out of WAIT at Bentley. The fact of the matter is, however, that the option never really received much attention in government circles from any of the political parties. Under prevailing notions of advanced education in the late 1960s, when the core decisions were taken, such institutions as WAIT were simply not regarded as genuine candidates for university status. Robertson and Williams argued in vain against the establishment in Western Australia of a second university. The irony was, of course, that WAIT's precocious success in its first decade of operation served as a rationalisation, albeit dubious, for Murdoch University's inability to attract students in the 1970s. The Partridge committee (1975); Birt, in his report of 1979; and Murdoch University itself—all were justifiably embarrassed at the difficulty in maintaining that line of reasoning. Commonwealth pressures in the 1980s to effect an amalgamation or at least a close co-operation between Murdoch University and the University of Western Australia (UWA) were well rehearsed in the late 1970s.

Much of WAIT's growth in its first ten years is explicable in terms of planned ventures meeting vocational education and training needs at the post-school level—needs that universities were either loath to serve or bidden under Commonwealth policy to rebuff. A persistent theme in the present history of WAIT is that the institution provided an academic base for many occupations and newly emerging professions (originally perhaps functioning at the paraprofessional level) that no other institution could accommodate. Service to the community also included the vigorous provision of part-time study opportunities and the establishment of an extensive system of external (distance education) studies.

(Western Australia's need for non-university routes to professional standing in sciences and engineering was well established before WAIT even was conceived. The Perth Technical College and, later, WAIT offered opportunities to a whole generation of students who, under existing circumstances, could not gain access to the 'élite' university forms of professional education. For government and many industries, WAIT programmes offered a training geared to the specific needs of Western Australia. It was the engineering profession itself that forced such institutions as WAIT eventually to conform more closely to university models of professional preparation. As explained in the present book, the process of adjustment required at WAIT formed part of a national trend, and it corresponded with worldwide shifts in student preferences for enrolment in the social sciences.

In the applied sciences WAIT built upon a base of service teaching and professional courses as well as the preparation of secondary school teachers, to make important contributions to the training of scientists for government and industry. Particular success stories have been in the field of teaching innovation and in serving the applied research and development needs of Western Australian industry. WAIT's physics and chemistry departments have attracted a cadre of outstanding scientists who, under the leadership of Dr John de Laeter, have consistently drawn to WAIT, levels of research and development money unmatched in any other Australian CAE. The decline of service teaching in these departments, however, undoubtedly has serious implications for the future theoretical and research base necessary in a university of technology.

During the 1970s the clearest example of WAIT's role in meeting professional needs outside university education was in the health sciences. WAIT built quickly upon a foundation of pharmacy, medical technology and the therapies to establish Australia's most comprehensive health sciences school. Absorption of the local branch of the Australian College of Nursing was the outcome of specific initiatives within the nursing profession; the advent of college-based programmes in nurse education at WAIT generated considerable national controversy. The School of Health Sciences at WAIT won recognition that extended well beyond Australia's shores. The research and development achievements have been remarkable by any yardstick. Yet almost none of these fields could find a home in UWA.

WAIT's business programmes were a special case. They built upon a foundation of close co-operation with the accounting, government and business communities started at the Perth Technical College that predated commerce degree studies at UWA. It was impossible for the university to meet the insatiable demand for business education, or for it to provide the range of part-time and external opportunities needed by practitioners in the field. Institution-based management training in Western Australia was pioneered by such Perth Technical College staff as Cecil Emil Carr and Dr Norman Francis Dufty, who later figured among the educational leaders at WAIT. In the longer term, establishment of business programmes in the mid-1970s at the Churchlands CAE (later Edith Cowan University—Churchlands campus) flowed directly from WAIT studies of its own growth, and assessments of need in Perth's northern suburbs. At the post-graduate level, resistance to WAIT's role climaxed at the time of the Ralph Report (1982), which adopted an approach to the management training needs in Australian government and industry that flew in the face of widely understood deficiencies in the management, administration and marketing structures of Australian industry.

Where the social science-based professions are concerned, it is not commonly known how extensive were Perth Technical College commitments in the applied and social sciences, and in educational administration, before WAIT itself came into being. These commitments were direct responses to the then desperate shortage of secondary school teachers and a lack of flexibility in existing university degree programmes. It was natural, therefore, for WAIT to move eventually into teacher education and especially into the fields of science and mathematics education. Educational administration developed out of the Department of Management. The Kindergarten Teachers' College too, was encouraged to seek a merger with WAIT. The idea of linking teacher education to major CAEs claimed solid support from the Commonwealth government.

In such other fields as library studies, drama, journalism, social work, home economics and even Southeast Asian studies the existing universities lacked suitable courses; were bound by quotas that could not produce graduates in the numbers required in the community; discouraged part-time and external enrolment; or preferred the general bachelor degree. More often, it was a combination of these factors and the ascribed 'theoretical-pure' academic role of universities under the binary system that created opportunities for WAIT to develop appropriate courses, in close co-operation with the occupational groups concerned. Academic traditionalism and a measure of complacency in university circles also played a part in enabling WAIT to establish highly innovative and indeed pioneering courses that proved successful in attracting students.

This situation notwithstanding, WAIT faced an extremely uncomfortable few years following the Partridge inquiry of 1975 and the Birt inquiry of 1979. Williams' response at the time—to argue a positive case from the strengths of WAIT's community service and achievements, rather than respond negatively to the sometimes antagonistic and emotive criticism of the period—turned out

to be the correct strategy. If anything, it drove WAIT more firmly into the entrepreneurial research and development work in applied science and technology and the social sciences that became a trademark of WAIT operations in the 1980s.

In the final analysis, controversy was associated with much of WAIT's development because its academic leadership constantly challenged the accepted protocols in co-ordinating authorities and government ministries of education. As director-general of education, Robertson was strong enough politically to gain acceptance for the then relatively new principle that WAIT should be an independent institution, with a statutory basis comparable with that of UWA. Course developments in almost every field offered at WAIT were driven at some time against the prevailing wind of State, Commonwealth and key co-ordinating bodies' policies. The School of Mines at Kalgoorlie provided more than its fair share of public notoriety. In the late 1970s the whole institute role and growth claimed the attention of interested parties in government and the universities.

Under Watts the challenge to established policy was raised to a virtual art form, fuelled by WAIT's irrepressible emergence as a force in applied research for industry. There were unique features of this, notably WAIT's central role in the establishment of Western Australia's Technology Park. During the 1980s WAIT was far ahead of its rival institutes of technology in the fields of research and development; and, in that respect, presented a major perturbation to the then balance between university and advanced education functions.

Watts led the attack on Commonwealth government policy that eventually brought an end to the Australian binary system of higher education. Entrepreneurial ventures involving the introduction of fee-paying overseas students into Australian higher education also played a part in the eventual demise of established policy and structures. An interesting feature of all these developments is the way in which the education bureaucracies were outflanked by the key economic and trade ministries which carried more clout in government decision-making.

The present study of WAIT's history nevertheless highlights the unique role played in its fortunes by Robert (Bob) Pearce, the Labor Western Australian minister for education from 1983 to 1988. The merits of Pearce's educational reforms in Western Australia during the 1980s will be debated for years to come, with many subject to severe censure from his opponents. In this respect, his unilateral move to transform WAIT into a university of technology will figure high among the controversial changes wrought during his ministry of the education portfolio. Pearce and Watts, initially from opposite sides of the ideological fence, shared much in common when it came to challenging the binary system and the role of institutes of technology in research and development for industry. They not only questioned the system, they confronted and changed it.

There is always a danger of 'puffing' WAIT's role in the confrontations of 1985-6. The strains of maintaining the binary system were evident in every

State and would have eventually caused it to founder. The Royal Melbourne Institute of Technology (RMIT) in Victoria, and the New South Wales Institute of Technology (NSWIT) were poised to achieve university designation, even if it had not occurred at WAIT. There is no questioning, however, that Pearce's actions in Western Australia were catalysts in precipitating the national revolution in higher education that occurred in 1987–8. Action to accommodate the new designation of Curtin University of Technology provided, if nothing else, the precedent for action in other places.

A significant aspect of the advanced education tradition has been a deliberate focus upon the employability of graduates, with the close involvement of employing agencies in both the design and review of courses. Where WAIT was concerned, this always ensured that graduates experienced little difficulty finding suitable employment. The graduate diploma course structure, moreover, opened job preparation opportunities to university graduates from general arts and science degrees that (apart from school teaching) had not generally been available in the universities themselves. Surveys conducted since the early 1970s at WAIT and (later) Curtin University have consistently recorded high job placement records among graduates and reported high average starting salaries. On the last point, of all graduates of Curtin University, those from the School of Mines invariably obtain the highest salaries. In the broader context WAIT, like most CAEs, has fulfilled the role specified for the colleges since their inception.

The point is made in the present work that institutions like WAIT in their early days were intended for training run-of-the-mill professionals, rather than élite professionals who attended the established universities. Moreover, until recently there were few opportunities for WAIT graduates to proceed to post-graduate education except by transferring to a university. The consequence has been that, in the past, extremely successful WAIT graduates won higher academic honours after having transferred to other institutions in Australia or overseas. There are nevertheless particular professional fields—art and design, architecture, mining, business and pharmacy, for example—which were especially strong at WAIT from the earliest days, and which were not initially placed in traditional universities in Western Australia. Not surprisingly, it is in such fields where WAIT graduates have established their special mark in local and other communities.

Notwithstanding these observations, the applied sciences at WAIT have produced graduates for a wide variety of occupations. In applied physics, for example, graduates have found their way into such fields as health, computing, oceanography, public services, space science, environmental science, education, mining and manufacturing industries, management and marketing, as well as the more obvious positions involving research. Much the same record applies to chemistry, biology, geology and geophysics.

Where the health sciences are concerned, WAIT's graduates now populate extensively the ranks of local practising professionals in the therapies, in pharmacy and in medical technology. In nursing and other fields the WAIT

post-graduate programmes have been available only since the late 1970s, but have still provided opportunities for many who are occupying positions of leadership. In pharmacy, graduates now occupy senior positions in government and in several pharmacy departments of Perth's major hospitals, as well as populating the ranks of pharmacists in private practice.

In the field of architecture the bulk of Perth's senior practising architects trained at the Perth Technical College. The architecture schools at UWA and at WAIT have been in operation for only twenty years, but there have been a few from both schools who have made their mark winning design awards.

Not surprisingly, WAIT's graduates in art and design comprise an élite group among their peers. A book on contemporary jewellery for the period 1977-87, for example, lists no fewer than eleven WAIT graduates among fifty-eight leading jewellery artists in Australia, and includes WAIT staff David Walker and Jeannie Keefer Bell among its list of artists with long-standing contributions to the field. There are few exhibitions of art in Western Australia which do not feature works by painters, sculptors and other artists trained at WAIT.

As might be anticipated, WAIT's business graduates have begun to infiltrate the upper echelons of their profession. They now number among the partners in accounting firms, the ranks of middle level and higher level public servants, and the directors and managers of companies. The high incomes offered in the accounting profession have resulted in many WAIT staff members taking up senior positions in government, industry and the relevant professions.

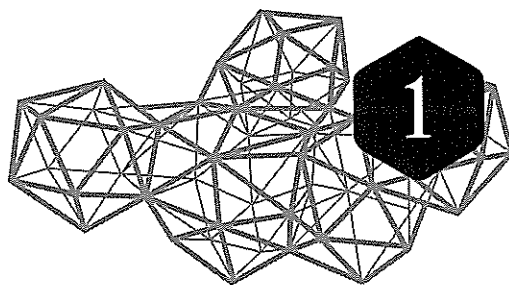
This historical study of WAIT has not attempted to hide the institution's failures and shortcomings. The very fact that so much of its history has been the centre of public controversy has ensured that perceptions of WAIT's excesses and stumbles have received banner headlines in the local and even the national media. Continual growth and motion have given a frenetic pace to life at WAIT that seldom allowed time for cooler evaluation of progress and achievement. As indicated in the present study, there have been occasions when more attention to quality would have slowed the rate of new development. The fact too, that research and development have been pursued with funding raised in the main from industry, without support from the Commonwealth, placed WAIT's academic staff under impressive pressures during the 1980s. Recurrent funding difficulties, following the over-enrolment crisis of 1982-3, also contributed to an erosion of WAIT's (and now Curtin University's) financial reserves to a point where a period of stock-taking may well be necessary.

University status itself introduces a dilemma, raised by Williams in 1974-5 when the issue first surfaced. He warned that WAIT's great strengths lay in its willingness to experiment, to be flexible, to reach out to the community and serve its vocational needs, without carrying the traditional incubus of perceptions about what universities should do and be. An understanding of the phenomena of 'credential creep' and 'institutional drift' clearly influenced the lines of functional demarcation between university and advanced education under the binary system. Yet that demarcation never dealt sensibly with the special status of the large metropolitan institutes of technology.

With the binary system then removed, what happens to institutions like WAIT once they become institutions like Curtin University of Technology? In Australia the only real precedent is the New South Wales University of Technology which in 1958 became the University of New South Wales and joined the established university sector of higher education. That very event provided justification for the establishment of the NSWIT, now the University of Technology, Sydney. At WAIT the adoption of traditional logos, titles and course nomenclature once Curtin University of Technology came into being may be a sign of forces that need to be resisted, of demons that need to be exorcised. Many council members were dismayed when the WAIT logo was abandoned in 1987, seeing this as an unnecessarily severe break with Curtin University's beginnings.

This history of WAIT aims to describe its growth from beginnings within the State system of technical education in Western Australia, providing an insight into the ideas, people, educational programmes and events that have shaped the institution from its inception to its designation as a university. The study seeks to explain developments by reference to the broader context of higher education both in Western Australia and at the national level, as well as by examining the internal dynamics of the institution itself.

The work is organised into twelve chapters. The first chapter recounts the ideas and political developments leading to the establishment of WAIT in 1966. In the next five chapters, attention is focused on particular themes that were significant in the first ten years of rapid growth, ending about 1975. In turn, chapters deal with governance, organisation, planning and administration; buildings and grounds development; the emergence of a higher education institution out of an institutional culture centred in State technical education; the development of WAIT's academic departments; and the absorption into WAIT of several small technical schools and colleges. Chapters 7 and 8 deal with the period 1975–80, when WAIT's academic departments were reorganised into schools and the institution's spectacular growth became the subject of critical scrutiny in State government and Commonwealth government circles. The final four chapters deal with the years 1980–7, when WAIT under the leadership of Watts emerged as Australia's newest university of technology. They examine the reorganisations introduced by Watts; the transformation of WAIT into a significant force in research and development; the frustrations experienced under the binary system of higher education; and, finally, the highly controversial circumstances leading to the establishment of Curtin University of Technology.



Establishment of the Institute of Technology

Decisions to establish the Western Australian Institute of Technology were taken during 1962 and the first buildings opened in 1965. WAIT, as the new institution became popularly known, was nevertheless the end-product of decades of speculation and planning, and the personal drive of several key personalities in the Education Department of Western Australia and the State government. Moreover, (WAIT emerged from a base of higher technical education that had commenced in 1900, and had gradually matured to the point where the establishment of an entirely new institution could be supported by a State government prepared to shoulder the financial burdens involved.) WAIT came into existence, planned from the outset as a brand new institution situated on a specially selected site, prior to the advent of Commonwealth government assistance to the States for the expansion of tertiary education outside the universities. Only (after the first buildings were established did Commonwealth money begin to flow, facilitating a much accelerated development.) This first chapter (deals with the institutional pressures, individual visions, frustrations and achievements, and political interventions behind decisions eventually taken in 1962.)

When WAIT commenced operations in 1965, it was still part of the State Education Department, administered by the Technical Education Division. Moreover, it stood on the shoulders of three institutions of earlier vintage. WAIT's history is inextricably bound to the beginnings of technical education in Western Australia, starting with the Perth Technical School, established in 1900, and the Western Australian School of Mines, which opened in 1902. A third institution, the Muresk Agricultural College, opened its doors in 1926. These institutions, in turn, developed alongside and were substantially influenced by UWA, which opened to students in 1913.

The Phillips Vision

The idea of establishing an institute of technology originated from a report on the State's technical training needs for the post-war reconstruction period, prepared by Leslie William Phillips in 1943 at the request of the Western Australian Government. Phillips, appointed superintendent of technical education in 1942, was a chemist of some standing, holding an MSc degree from the University of Melbourne and having been involved in the development of the Australian Chemical Institute at both State and national levels. He also had served on the State committee of the then Council for Scientific and Industrial Research and lectured regularly at UWA. During 1936 Phillips had attended the Institute of Education of the University of London as the State's first Carnegie Fellow. He afterwards had prepared Australia's first professional history of technical education, presented for the MEd degree of the University of Melbourne in 1938. Whilst overseas he had taken special note of the growth in Britain of professional courses in the technologies, and was aware of the ferment in Europe about the future of higher technological education during the Depression years.¹

After the Depression of the 1930s, the Western Australian Government was anxious to develop secondary industry as a means of broadening the base of the State's economy, generating employment and promoting post-war economic development. Such development, in Phillips' view, demanded a complete reorganisation of technical education, which included the revival of higher professional education and applied scientific research at the Perth Technical College. To this end Phillips' report recommended the re-establishment of associateship courses in engineering; the concentration of higher level courses at the Perth Technical College; the consequent dispersion of trade and other courses to suburban technical schools; and governance reforms that would strengthen ties between technical education, industry, commerce and government.

Professional (associate) diploma courses had been a feature of the early work of the Perth Technical School and the Western Australian School of Mines prior to the opening of UWA in 1913. The Perth Technical School associateship courses (apart from limited opportunities in chemistry) were withdrawn to protect the new university degree courses in engineering. (The Perth Technical School, renamed the Perth Technical College in 1929) afterwards concentrated on trade and post-trade training and other forms of lower level technical education. Always short of needed resources, the Perth Technical College had suffered badly during the Depression years, even though accorded some belated recognition in the 1937 Wolff Royal Commission into youth employment and the apprenticeship system.²

A case for the revival of engineering associate diploma courses had also been strongly advanced by James Nangle, a former superintendent of technical education in New South Wales, who in 1928 had conducted an inquiry into technical education in Western Australia. (He proposed that the Perth Technical College should revive these courses to provide an alternative route to

professional qualifications, outside the university system.) In this respect, both New South Wales and Victoria were much better served at the professional level by their technical education systems. In New South Wales there were moves in the late 1930s, initiated by Nangle himself, to enable technical college diplomates to obtain degrees in technology.

In Western Australia, room for such development emerged in the wake of State government action following a royal commission into UWA in 1942. The university afterwards moved to concentrate upon the more traditional academic disciplines, foster research and promote full-time education at the undergraduate level. This involved abandonment of several subgraduate courses, as well as the rehabilitation of the university's engineering degree programmes. These policy shifts represented a fundamental reappraisal of the role of university education in applied science and professional training. A more traditional role for UWA also placed renewed emphasis on the need for opportunities, beyond the post-trade diploma levels, for able and highly motivated people who for a variety of reasons were unable to attend conventional university courses.

Another influential factor was Commonwealth government promotion of higher diploma courses in Australian technical colleges, as part of the Commonwealth Reconstruction Training Scheme. In response to urgings by the Australian Education Council in 1943, the Commonwealth extended financial assistance to ex-Service students in these courses, on much the same basis as for university degree programmes. The colleges also received funds for staff and major equipment items needed, under the Commonwealth Reconstruction Training Scheme.

In the immediate post-war years Phillips, a participant in the Australian Education Council initiatives mentioned, successfully launched new associateship courses in engineering, architecture and commerce. This was not done without opposition from key professional faculties at UWA, especially engineering, which harboured ambitions to break out of restrictions imposed by Depression finances. The Institution of Engineers (Australia) also contested the issue. The local branch of the Royal Australian Institute of Architects, however, actively supported the Perth Technical College developments, not least as a means of satisfying the demand for professional architects in the post-war building boom. With respect to commerce, Phillips' view prevailed in the short term, with UWA focusing on economics, and leaving commerce to be developed at the Perth Technical College from a base of classes leading to examinations of the various professional accounting societies. These societies later accredited Perth Technical College programmes as meeting their own examination requirements.

The associateship programmes were to form the base of Phillips' planned central technical institution, functioning at the higher professional training level. The Commonwealth indeed offered funds for a higher-education building which was planned for the western side of Perth Technical College, but the State government failed to take up the offer because of the heavy

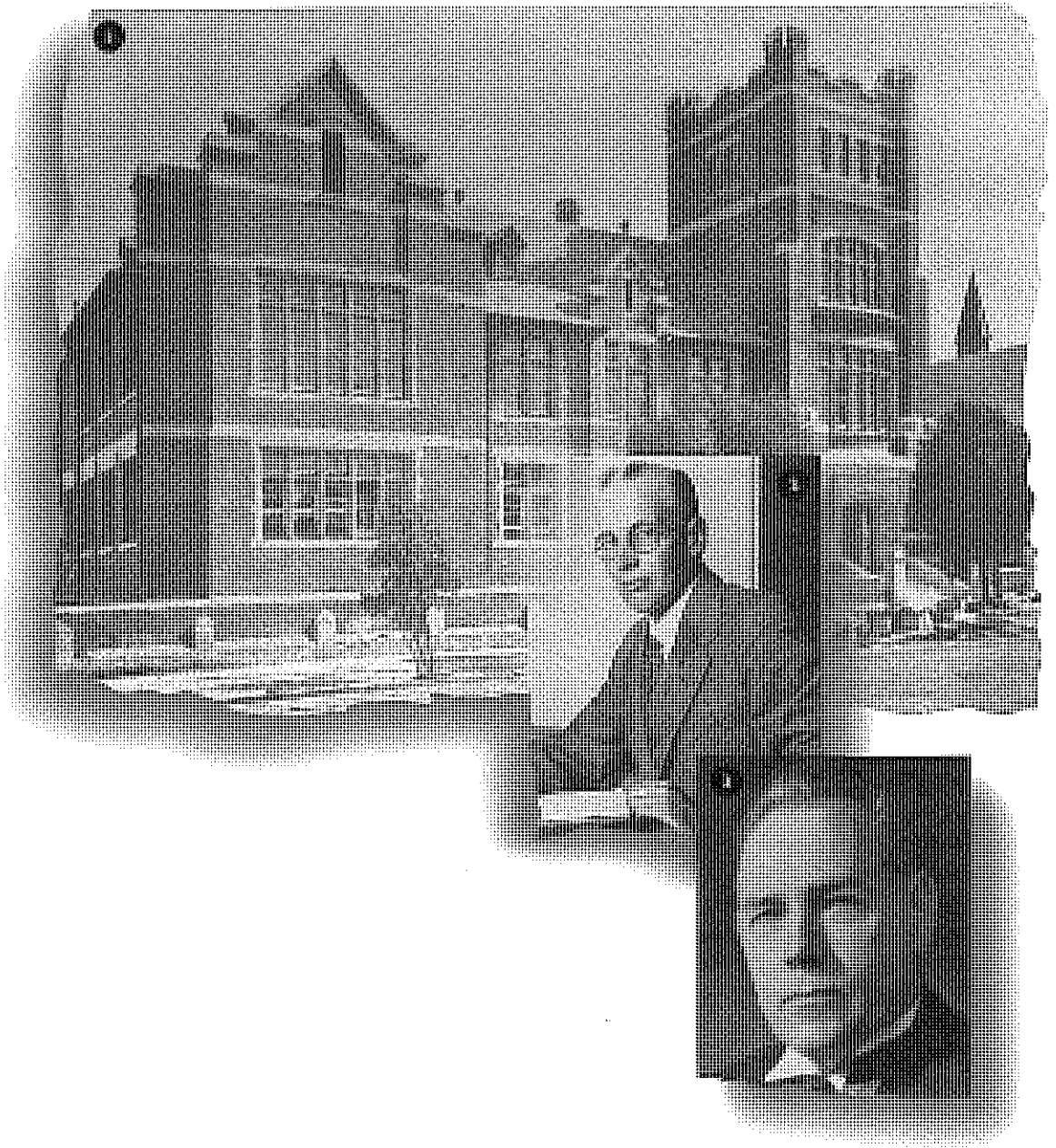
demands for building materials in the housing, industrial and commercial construction sectors. Western Australia had earlier been the first State to respond to Commonwealth requests for cuts in these areas to support the war effort. The Commonwealth's offer later expired.³

As it happened, Phillips himself did not live to witness the materialisation of his ideas. Exhausted by sheer overwork during and after the war, he suffered a coronary occlusion in April 1948 from which he never recovered. He died in May 1949, as much a victim of war service as many who had served in the forces.

Revived Initiatives in the 1950s

Initiatives regarding the institute of technology were revived in the 1950s, led by Dr Thomas Logan ('Blue') Robertson, William George Hayman and Dr Haydn Stanley Williams, three influential leaders in the State Education Department. In 1950 Robertson returned to Western Australia from work with the Commonwealth Office of Education to become director (later director-general) of education. Like Phillips, a beneficiary of study in England as a Carnegie Fellow (in 1938–9), Robertson brought to the post of director a gift for long-term planning, a well-earned respect in State and federal political circles, a wealth of administrative experience, a strong personality and relative youth, which enabled him to become one of the most respected public servants in Western Australia. Hayman, who had succeeded Phillips as superintendent (later director) of technical education and been closely involved in the detailed implementation of his predecessor's schemes, kept alight Phillips' vision of an institute of technology. Williams, one of Phillips' protégés in the technical education system and another to benefit from overseas experience in the late 1940s, returned to Perth in 1950. He became Hayman's assistant director in 1956 and played the leading role in framing policy for the development of higher technical education in the State.

Population growth, economic development and shortages in the trained work-force in the 1950s and 1960s added a sense of urgency to educational planning and expansion in the State. The opening of the Kwinana industrial estate in 1952, which culminated an extended period of economic development planning by State governments since the Depression years, highlighted Western Australia's lack of technically trained people for secondary industry. At the same time, population pressures from post-war birth increases and immigration created an insatiable demand for education, starting with primary schools and moving later to secondary and technical and higher education. Robertson's great success lay in concentrating limited State resources at appropriate times to cope with these demands, rather than dilute effort too widely across all sectors. Finally there developed in post-war years a worldwide acceptance of investment in education—and particularly higher education in the sciences and technologies—as a precondition of economic growth.



1 Perth Technical School, 1910.

2 Leslie William Phillips, appointed superintendent of technical education in WA in 1942, planned to reorganise the State's post-war technical education with a new central institute of technology.

3 Ray Davis had a 45-year association with the Perth Technical College starting as a student, then lecturer and head of the Department of Mathematics and Physics, and finally principal of the college (1942-55).

Soon after becoming superintendent of technical education, Hayman began urging Robertson to commence planning for a higher technological institution in Western Australia. He drew attention to the establishment of the New South Wales University of Technology and moves for a similar institution in Melbourne, as developments which had implications for Western Australia. Commonwealth financial assistance to Australian universities after the 1949 Mills Report also induced him to urge upon Robertson the need to have this assistance extended to all institutions 'teaching at the higher technological level'.

Robertson, however, was initially unimpressed with Hayman's agitation, which he dismissed as '...a lot of guess-work, half-truths and wild conjecture'.⁴ This assessment had something to do with Hayman's unsophisticated reading of the educational literature. He was no philosopher or theorist as were Phillips or Williams, but more the bluff, no-nonsense engineer, impatient to get things done. Robertson agreed with Hayman, however, that the expansion of secondary industry in Western Australia, notably within the complex at Kwinana opened in 1952, would increase the demand for many new courses of a technological nature.

Robertson was more receptive to proposals that land should be secured to provide in the longer term for a new technological institute. Hayman, in this respect, cited experience in both Sydney and Melbourne, where expansion on existing city sites had become difficult and expensive. He spent some time considering possible sites on reclaimed land south of Heirisson Island, and on University Endowment Land between Jolimont and Daglish. In 1952, however, (Robertson suggested Hayman cast his eye over the Collier Pine Plantation. Hayman,) supported by an opinion from the government's principal architect, A. E. Clare, reported favourably. In fact Clare suggested reserving a bigger site than the 100 acres recommended by Hayman, so that the projected institute would not run short of land as had occurred at UWA.

Robertson supplied the rationale for a 'Technological Institute...virtually a University of Technology which teaches the various branches of technology at the highest levels'. He explained the growth in stature of work in the Perth Technical College, the development of technology separately from the trades and the vital connections between the State's industrial development and technology. Sydney's and Melbourne's space problems were also cited as reasons for reserving land at this early stage.⁵

(The State Lands Department in 1954 quickly formed an interdepartmental committee to reconcile conflicting proposals for the Collier site.) It had been promised to the South Perth Roads Board for development when the pines matured, while the government Forests Department wanted the land for a headquarters complex, as well as seeking a return on the investment involved in developing the pine plantation. Projected developments also needed rationalisation in relation to the Stephenson-Hepburn Plan for development of the Perth metropolitan area.

At this stage the Education Department expressed little urgency in its proposals. As Robertson's view was recorded:

The Technological Institute is a long term scheme for which provision of a site was being sought in a suitable locality (experience in the Eastern States having provided a warning), but he was prepared to accept a site suitable and sufficient for his purposes, but not the particular area which he had indicated in his original request.⁶

At the same time, Robertson substituted the word 'institute' for 'university' to avoid the possibility of his long-term plans upsetting discussions with UWA, which involved wider recognition of Perth Technical College courses. He also cautioned that the land would not be needed for twenty years.⁷

During 1956, Education Department concern about the future of the Perth Technical College assumed more urgency. Central to this situation was a demographic reality: the demand for higher education would rise steeply once the wave of young people born during and after the war began to finish their secondary education. The financial implications for Western Australia, a 'claimant State' where grants from the Commonwealth Grants Commission were concerned, were serious for the State government.

Both Robertson and Hayman looked to a closer relationship with UWA, which would not only satisfy the needs for technological education, as they saw it developing, but also effect financial savings to the State government and the Education Department. Tentative approaches to UWA's Professorial Board were made in 1954 in this connection. The university at this time, however, appeared likely to benefit from Commonwealth financial assistance to the States, as a result of the projected Murray committee inquiry into university education. At UWA, anticipated developments included the establishment of university colleges in provincial centres and an expansion at Crawley (site of the university) into many of the professional fields that the Perth Technical College had pioneered. Even the possibility of a second university in Perth, or at least a university college, was being canvassed.

The Education Department's first priority, however, favoured redevelopment of the central city sites occupied by the Perth Technical College. (Money for this redevelopment was badly needed, since the buildings had fallen into a sorry state of repair and were incapable of coping with the expansion of student numbers which was already taking place.) Indeed the motley collection of late-Victorian and Edwardian buildings in Perth was little short of a disgrace. A second site of the Perth Technical College, planned for development in 1960, lay north of the central railway station in the middle of Perth's 'red light' area.

All this lay in the background to approaches in May 1956 by Robertson to Labor Premier of Western Australia A. R. G. Hawke and Minister for Education W. Hegney, in which he spelt out what he considered needed to be faced in Western Australia.⁸ His ideas at this time were refined and re-submitted to the premier following an extended visit overseas on a Carnegie Fellowship, used to study developments in New Zealand and North America.

California's master plan for higher education clearly influenced his thinking, as did his earlier experience at the University of London.

Robertson initiated discussions with UWA during 1954 with two purposes in mind: to seek co-operation in the harmonious development of technological courses; and to find ways in which the university might award degrees to students completing the Perth Technical College courses in technology, and so improve their recognition in appropriate circles.⁹ Difficulties multiplied when the university announced an intention to establish a degree course in (architecture,) which would naturally compete with the college course. Within the Education Department these proposals sparked fears about possibilities of the university eventually absorbing the college's tertiary work. Very little happened, in the event, from this first round of meetings.

In 1956, with Hawke's support, Robertson again approached the vice-chancellor of UWA, Sir Stanley Lewis Prescott, with a plan involving the university and other institutions concerned with tertiary education. Its object was to preserve the special character of the non-university institutions, build upon an institutional base already functioning, and yet avoid the possibility of the State having to finance the establishment of a second university.

Robertson's scheme envisaged UWA functioning as a 'mother' institution with a number of 'daughter' or affiliated institutions, somewhat akin to the situation applying between the University of London and its constituent colleges. The constituent colleges in this arrangement would be the Perth Technical College, the Teachers' College at Claremont, the School of Mines at Kalgoorlie, and perhaps even the Muresk Agricultural College. They would retain their existing range of courses, but achieve a greater level of recognition by way of degree awards conferred by the university. The scheme involved a substantial enlargement of existing affiliation arrangements between the university and the other institutions. In Robertson's view the advantage lay in enabling the State to expand avenues for professional and technological education without duplicating '...at the University, facilities which already exist in other institutions and which could be expanded with little additional expenditure as the need arises'. Particularly concerned about avoiding the need for a separate university '...as has been done in New South Wales and as is proposed for Victoria, but which has many drawbacks', Robertson further urged that '...in a small State like Western Australia which has difficulty in maintaining its one university, the conception of a second university is untenable'.¹⁰

Discussions between Robertson, Prescott and professorial members of UWA's Senate, Bayliss and Clews, failed to achieve much progress. While there was general sympathy for accepting particular units (subjects) for degree-crediting purposes, the introduction of more blanket agreements involving, for example, the award of degrees in technology, was another matter. Robertson believed the university saw itself as perhaps 'taking over' the higher level facilities, courses and students to effectively concentrate all the technologies upon the university. Robertson's initiatives were ill-timed, as they coincided

with the university's preparation of its submission to the Committee on Australian Universities (Murray) in 1957. This submission envisaged the university being able to break the chains of its pre-war financial straitjacket and introduce new degree programmes in such fields as architecture, commerce, administration and management.

This was precisely the development Robertson wanted to avoid. Not only were the costs to be challenged, but these courses were already functioning at the Perth Technical College. If the courses were to move under university control, moreover, in Robertson's view the needs of 'unconventional' technical college students and the middle range diploma candidates would be overlooked. He agreed with some apprehension, however, to let matters rest till the results of the Murray inquiry were known.

Where the Murray inquiry was concerned, Robertson attempted to widen its perspective to include technological and professional education outside the universities. Failing to achieve this through appeals to the prime minister of Australia from Premier Hawke, Robertson charged Williams with responsibility for preparing a submission to the Murray committee, detailing the financial needs of the Perth Technical College, the School of Mines and the (by now) two teachers' colleges.¹¹

Williams from this point became Robertson's right-hand man where policy and planning at the tertiary level were concerned. Hayman took charge of the detailed work on building, equipment and staffing specifications. Williams, in the submission he prepared, commenced developing a philosophy of higher education that led to innumerable addresses, papers, briefing papers and official government submissions, establishing him as a national figure in the field of tertiary education. For the Committee on the Future of Tertiary Education in Australia (Martin), he reflected upon current thinking among educational economists about the value of investment in higher education, and outlined what essentially became the theoretical framework of the binary system of tertiary education. This emphasised the applied mission of technical institutions as compared with the 'pure' and 'research' orientation of university education and also concentrated heavily upon the needs of a 'different' type of student—requirements such as better teaching and more flexible attendance and study conditions. In this context Williams demonstrated the remarkable expansion of new professional and technological fields in the post-war years which, although readily accommodated in the Perth Technical College and the School of Mines, found difficulty being accepted as legitimate at UWA. Williams' case also explained how the pool of eligible tertiary level students had barely been tapped, and examined ways in which their needs could be addressed through an expanded system of higher technical education.

Elsewhere in the submission Williams spelt out the financial needs of technical institutions—their capital, equipment and aesthetic deficiencies—if the State government was to remedy long-standing injustices and meet the challenge of the future. The needs for improvement extended beyond simply bricks and mortar, to include staff salaries and conditions, more appropriate

student facilities, residential halls and the creation of aesthetically acceptable environments within the technical sector of tertiary education.

Whatever the fate of negotiations with UWA and of the Martin inquiry, Robertson's immediate priority was to rehouse the Perth Technical College. Upon his return from overseas in 1957 he persuaded his minister, Hegney, and Premier Hawke to appoint an interdepartmental committee to consider new building sites for the college. The object was to move temporary buildings from the St George's Terrace site and establish a new senior college on a site at James Street, occupied by the then Perth Boys' School. Proceeds from the sale of the St George's Terrace site were intended to offset costs of the new college, thus easing problems with the Commonwealth Grants Commission. Other factors needing assessment were the Stephenson–Hepburn Plan projections of a cultural complex in the James Street area, north of the central railway station. The Stephenson–Hepburn regional plan for Perth also included longer term provision for a technological institute in the Collier Pine Plantation.¹²

The committee finally reported in July 1957, after having reviewed a range of complex proposals involving a staged removal from St George's Terrace and a progressive movement into refurbished and newly constructed accommodation on the James Street site. A central issue was whether, in view of prospective expansion in engineering at UWA, the college engineering and technology departments were really needed. Robertson's strongly mounted case for separate college development in these fields prevailed, although not without some opposition from his colleague and member of the university's Senate, Under-Treasurer Kenneth Townsing.¹³

The James Street site received general acceptance in view of the high value placed on the sale of the Terrace site and the heavy costs of building in that central city location. James Street, moreover, was close to the city centre and at the hub of urban transport; it involved no costly resumptions and appeared large enough to satisfy space requirements for the next fifty years; it would facilitate the movement of school children out of the central city precinct; and it contained buildings that could be employed immediately for college activities. The costs would be met from the sale of the Terrace site and from State government sources. Staged development involved removal of high school students by the end of 1958, accompanied by the movement in of Perth Technical College students, extensions to suburban technical colleges to accommodate trades courses and demolition of temporary buildings in Mounts Bay Road (attached to the Terrace site). By 1959 the Perth Technical College would occupy the James Street and Terrace sites, with building underway to enable the latter to be vacated at the earliest opportunity.

Before Robertson went overseas in 1956, he had asked the principal of the Perth Technical College, A. P. (Percy) Ffarrington, to develop floor space estimates for the new college. Hayman, however, was responsible for the final plan. During 1958 Hayman travelled overseas during long service leave to view buildings and examine trends in Canada and the United States of America. His report included a wide range of institutional types, from secondary vocational schools to technical institutes and major universities. It presented a very mixed

bag. Hayman may have gained rather more from visiting a selection of Britain's colleges of advanced technology and central technical institutions, which would have had more in common with local conditions. Indeed in his final report, Hayman drew upon developments in these British institutions.¹⁴

Political Decisions 1959–1962

At the State political level, events took a new turn with the election to government of the Liberal–Country Party Coalition under (later Sir) David Brand in 1959. The Coalition went to the electorate with plans for ambitious development projects in mining and secondary industry, which were contrasted with a period of relative economic stagnation in the latter stages of the Hawke administration. Labor indeed had been on borrowed time since the party split of 1957. A leading light in the new government was (later Sir) Charles Court who, as minister for industrial development, railways and the North-West and later, as premier of Western Australia, oversaw nearly two decades of remarkable economic development in Western Australia.

In a risky initiative before the elections, Robertson went privately to Court, convinced not only that the Coalition would win the elections but also that it would succeed in implementing its development programme. In several discussions he convinced Court that for the major developments to succeed, Western Australia needed a wider base of skilled and professional personnel. Court recalls Robertson persuading him that the State needed highly trained technicians, paraprofessionals and professional technologists in addition to the tradesmen about whom Court had initially been most concerned. This was especially so where the huge-scale mineral projects were concerned, since they were capital- rather than labour-intensive. The problem was to find the money to build the new Perth Technical College, which was by now being referred to increasingly as an Institute of Technology.¹⁵

On this issue, Robertson went back to the university in October 1958, seeking to reopen discussion on his earlier proposals. The Senate, faced with strong academic opposition to Robertson's scheme, saw no point in pursuing the matter further. Robertson's frustrations were vented in correspondence with his new minister (and leader of the Country Party), Arthur Watts, to whom he recommended in late 1959:

I feel strongly that the Technical College should be developed into an Institute of Technology having full recognition by the University of Western Australia as a teaching and examining institution for certain degrees to be conferred by the University of Western Australia. This would be the first of such colleges. At a later stage one of the teachers' colleges could be similarly developed and for certain courses the Kalgoorlie School of Mines, and later, perhaps, Muresk (if the standard of its work lifted considerably). New Provincial colleges could also be developed at Albany and Bunbury....The University of Western Australia would itself be strengthened by such a move and not hampered by the petty jealousies and rivalries which would inevitably occur if a second university were to be established.¹⁶

By this stage some doubts were emerging as to whether the James Street site could actually accommodate the numbers expected to attend the planned

Institute of Technology. In November 1959 Hayman considered the merits of a site at the then Girdlestone Girls' School (above the Western Australian Cricket Association ground in East Perth) for accommodating such areas as commerce, the humanities and languages, psychology, public administration and management, home economics and art. Further land acquisitions over a ten-year period, he thought, might also make way for the sciences and technologies and for student facilities.¹⁷

Hayman's detailed specifications for the new Institute of Technology, completed in December 1960, embodied recommendations from the college department heads; projections of student enrolment growth and the State's population; and a distilled analysis of '...plans and specifications of a number of modern institutions and the equipment provided in them for teaching in similar fields and to a comparable level'. From Britain there were references to the work of the Ministry of Education, as well as advice from the Birmingham College of Advanced Technology, whose celebrated head Dr Peter Venables had visited Perth shortly before. From the United States of America Hayman drew upon specifications developed by L. Jarvic, J. H. Butler and Professor Huntington of the University of Illinois.¹⁸

The range and volume of tertiary work conducted at the Perth Technical College, which doubled between 1954 and 1959, is well illustrated by Table 1.1 (see page 26). Hayman's projections, based on a State population of 800,000 and a metropolitan population of 500,000 by 1970, suggested the need to cater for approximately 11,000 students. He indicated target figures for most of the major professional courses then operating. A full associateship course in pharmacy was also clearly needed and new developments in physiotherapy and occupational therapy were anticipated. Hayman's plans assumed development on the James Street site, and the eventual placement of home economics in a proposed 'women's college' on the site of the Girdlestone Girls' School at East Perth. Within these areas, provision was made for improved student amenities, a pattern of small-class teaching, a major hall and the construction of high-rise buildings.

State Cabinet in June 1960 approved in principle the building of a new institute on the James Street site, enabling Hayman to announce that building could start immediately and proceed over a five-year period, subject only to the State government being able to find the necessary funds. To this end negotiations between the State Treasury and several potential buyers of the Terrace site were initiated, while the State's principal architect and the town planning commissioner became involved in more detail to consider the design and urban planning issues.¹⁹

It was at this stage that architect Vin Davies, assigned by the Public Works Department to the project, queried the aesthetic and environmental appropriateness of situating a major technological institution next to the State Library and a projected new art gallery. Davies and Hayman also queried whether machinery noise and industrial effluent from the laboratories would be acceptable to either the Perth City Council or local property-owners. Authorities concerned now re-examined completely:

TELEPHONE: 21 6988

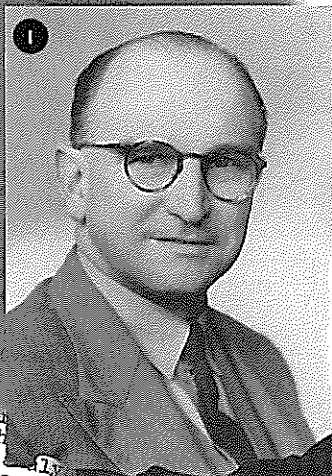
GOVERNMENT OF WESTERN AUSTRALIA

EDUCATION DEPARTMENT
TECHNICAL EDUCATION DIVISION
WGH:MB

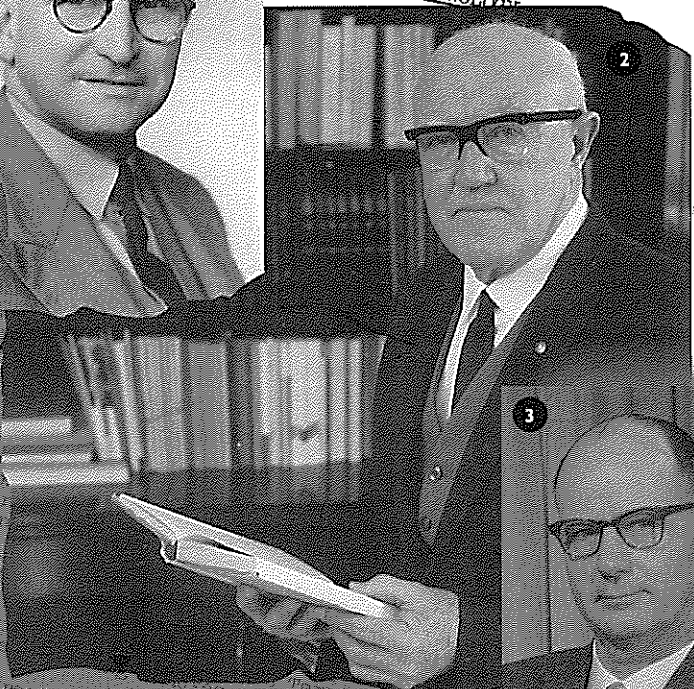
NEWSPAPER HOUSE
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PERTH

In replying please quote

7th December, 1960.



INSTITUTE OF TECHNOLOGY



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PRESENT COLLEGE

The
Central Institute
together with

1. James Street - which houses Commerce in the old Perth Boys' School and Art and Management in Girdlestone.
2. Highgate School - accommodating Women's Crafts - Dressmaking, Millinery and Home Furnishing.
3. The Aeronautical Apprentices Annexe at Redcliffe; and
Perth Annexe - accommodating the Divisional Workshop and the Central Equipment Annexe. All early 1961, the Vehicle

THE THREE MEN MOST CLOSELY INVOLVED IN THE ESTABLISHMENT OF WAIT

1 William George Hayman, as superintendent (later director) of technical education, urged the establishment of a new technological institute.

2 Dr Thomas Logan ("Blue") Robertson, as director (later director-general) of education in WA (1950-66), lobbied for the new institute and became inaugural chairperson of the WAIT Interim Council, 1967, and then of the WAIT Council for a few months until his sudden death in 1969.

3 Dr Haydn Stanley Williams, assistant director and then director of technical education (1955-67), and first director of WAIT (1967-79), wielded significant influence on Commonwealth policy-making in higher education for two decades.

Background: Hayman's report to Robertson on the proposed institute of technology, 1960.

[the] ...wider concept of an Institute of Technology (from which ultimately a new University of Technology may evolve) and its relationship with a Perth Technical College and with sections of such an Institute which can and should be centrally located in the city.²⁰

TABLE I.1 Enrolments in associate and diploma courses of the Technical Education Division of Western Australia, 1947-65 (Entry level: Leaving Certificate)

Course	Introd.	No. of Students								
		1947	1954	1959	1961	1962	1963	1964	1965	
Applied science	1958			5	46	68	81	99	127	
Architecture	1946	28	53	92	118	108	135	163	207	
Business administration	1960				8	8	8	13	10	
Chemistry										
Pure	1947	1	1	16	25	94	81	101	87	
Analytical	1955			4	6	4	5	21	10	
Engineering	1961					1	5	8	3	
Commerce	1947	7	6	70	124	150	165	240	188	
Education administration	1965								50	
Engineering										
Civil	1944	10	14	43	82	84	96	109	140	
Communications	1949		3	23	39	43	27			
Highway	1961				2	2	5	4	3	
Electrical	1944	22	7	23	42	35	55	57	46	
Electronic	1949		2		8	12	28	73	87	
Mechanical	1944	16	22	36	80	90	91	113	105	
Production	1961				4	7	9	15	17	
Home economics	1952		1		5	9	16	19	23	
Management accounting	1961				1	2	2	5	5	
Mathematics	1962					8	10	10	18	
Medical lab. technology	1962					59	62	67	56	
Metallurgy	1954		1		2	3				
Production management	1962						2	3	3	
Public administration	1961				6	6	8	8	15	
Social studies	1963						16	51	175	
Surveying	1963						18	33	42	
Pharmacy										
diploma	1905	15	91	150	166	183	170	129	90	
associateship	1964							60	94	
Quantity surveying	1961				5	8	6	6	7	
Town & regnl planning	1961				15	21	14	12	25	
Psychological studies	1961				22	40	43	59	135	
Art teaching										
diploma	1939	15	25	51	102	94	85	100	126	
associateship	1965								10	
TOTAL		114	226	513	908	1139	1243	1578	1904	

Source: Education Dept of Western Australia, in M. A. White, *The specific and interrelated tasks of institutions of tertiary education in Western Australia*, PhD thesis, UWA, 1968, pp. 374-5.

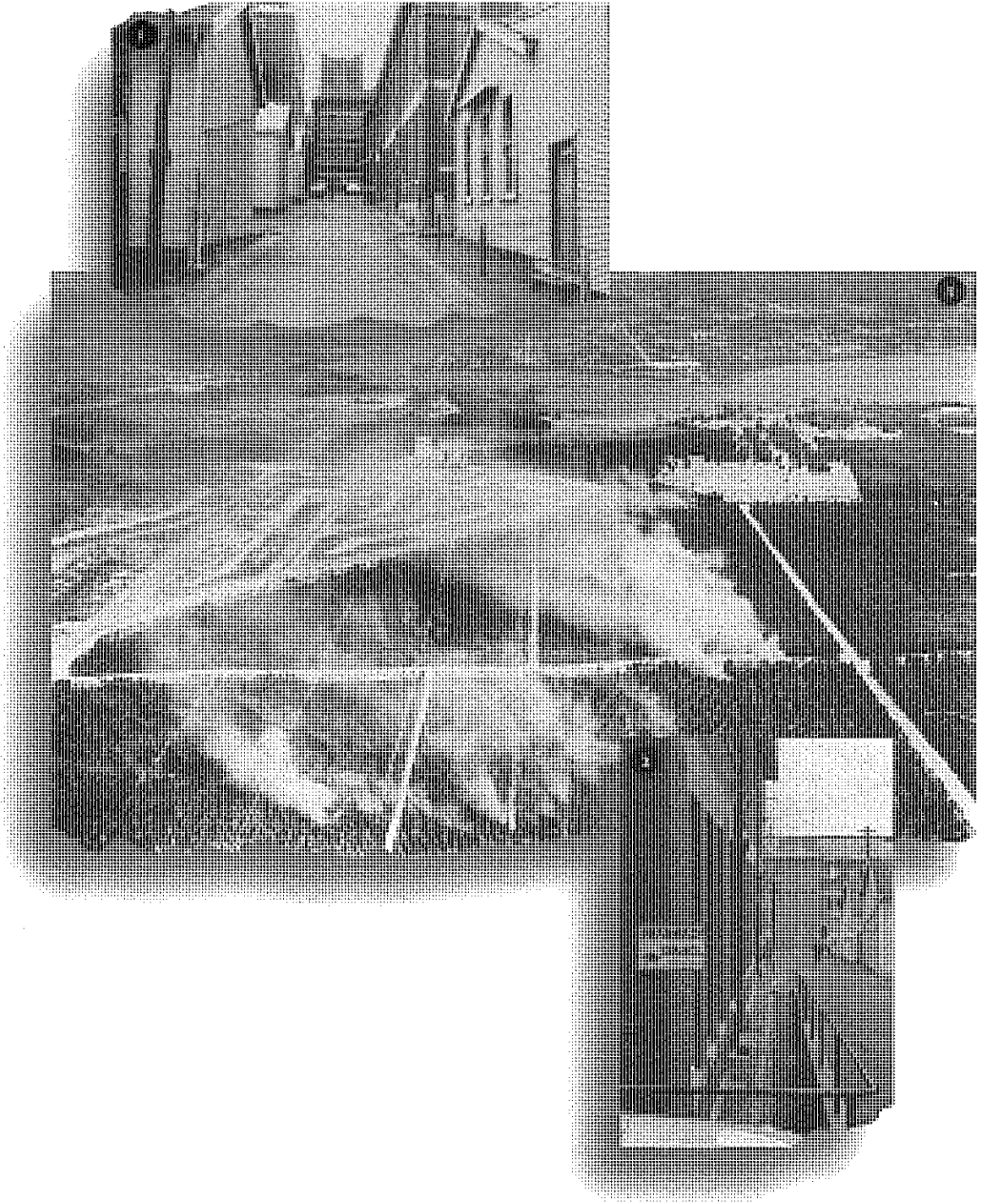
The town planning commissioner and the principal architect both favoured development at the Collier Pine Plantation, the site picked out in 1954 by Robertson. Re-examination of development at Collier had made available 277 acres for the future institute, while the environment there was considered more appropriate to the development of a major institution with playing-fields and student hostels. Fortuitously too, a bush-fire in 1957 had burnt down a section of the pine forest, which was therefore ready for construction. These arguments won over Under-Treasurer Townsing, who recommended that the technologies should move to Collier, leaving the James Street site for such fields as commerce and art. Townsing's advice carried the day with the State government, which accepted his recommendations in December 1960.²¹

Townsing recalls the situation: he had initially opposed the Institute of Technology project, for he had prior notice from Canberra of an inquiry into tertiary education which promised to recommend financial assistance for non-university tertiary education. The State Cabinet and the under-treasurer, however, were aware of mounting unrest among Perth Technical College staff, forced to endure the appalling conditions at St George's Terrace. In any event, Court was a strong supporter of the institute, while Robertson had painted a grave picture of school and other building needs, including the Institute of Technology. The proposed sale of the Terrace site was the clincher, even though this had run into unanticipated delays. Finally, a State election was due early in 1962 which the Coalition would be hard put to win. The Menzies Commonwealth Government was returned in 1961 with the narrowest of margins.

Staff unrest referred to came to a head with provocative statements by a college lecturer, John de Laeter, at a ceremony in April 1962. De Laeter did not mince words, and described the college accommodation as a disgrace to an audience which included Minister for Education Edgar Lewis. This earned de Laeter a carpeting from his superiors, since he had broken public service rules, but attracted widespread press coverage. Lewis, however, not only acknowledged that the comments were accurate, he remarked that if anything the facilities were even worse than de Laeter had depicted them. Some weeks earlier Lewis had visited the college with Robertson to view the conditions endured by staff and students.²²

New obstacles now appeared to delay proceeding with the James Street redevelopment. Town planning issues causing delays included problems affecting a planned bus terminal on the St George's Terrace site, and subsequent difficulties encountered with potential purchasers of the Terrace land. Later, Hayman's thinking about using the East Perth site for a 'women's college' ran into trouble when, in June 1962, the Police Department obtained approval to use the site for a new headquarters. Robertson himself, frustrated at the delays, argued in March for an early start on the institute in 1962/63 rather than the fiscal year 1963/64 being planned by the government.²³

Newspaper comment strongly supported the government's decision. In an editorial on 24 May 1962, *The West Australian* urged the government to proceed with the new institute, echoing Court's conviction that technical education



1 & 2 Dilapidated buildings and classrooms were hidden from public view behind the Perth Technical College's imposing facade on St George's Terrace, 1967.

3 The 1957 bushfire which cleared the way for WAIT to be built on the Collier Pine Plantation site.

'...is doubly significant in this State because of industrial development and the need to equip youth to supply the wide range of skills, from the crude to the highly sophisticated, that increased industrialisation will demand'.²⁴

Premier Brand on 19 June 1962 announced that the government would go ahead with the institute at Collier on the 277 acres set aside, and also that £100,000 had been allocated for an immediate start on planning the first buildings. When the plans had been completed, the Public Works Department would call tenders for the first construction stage, anticipated in the financial year 1963/64. It had been accepted that a start could no longer be delayed until sale of the St George's Terrace site was finalised. The shortage of Loan Funds meant that the project would start slowly in 1962, but pick up momentum in 1963/64 when a better situation was anticipated.²⁵

Brand's announcement received a favourable reception in the local press. *The West Australian* editorial commended the Collier site, adding: 'In scrapping the earlier plan to take up about half of the [cultural] centre with a technical college, the Government had broadened the scope of the site with challenging possibilities for town planning'. The editor also expressed the view that technical education had lagged behind the rest of the education system because of the earlier priority accorded primary and secondary school expansion. 'The new Institute', the editor commented, 'will enable a dramatic advance to be made in the teaching of the technologies', although warnings were also sounded about the need for complementary modernisation of apprentice training for skilled workers. In another perceptive observation, the editor asked:

(...how the Institute will stand in relation to the University. For instance, engineering is taught in both places and it is time architecture was recognised at the University. With millions of pounds being spent at Crawley it is essential that the work of the two institutions be dovetailed for maximum benefit to the community. They should be complementary, not competitive.²⁶)

Building at Bentley was planned in three main stages, geared to priority and the availability of the necessary funds:

- Stage 1: Applied science, starting with chemistry and followed closely by pharmacy, mathematics and physics. Expenditure of £1 million was anticipated by July 1965, with a further £130,000 for equipment.
- Stage 2: Student facilities, central administration and a main hall incorporating a large lecture theatre. The student facilities were needed because of the relative isolation of Bentley from independent commercial outlets.
- Stage 3: Buildings for a library, engineering, commerce, management, art and general studies. Until the money became available, these fields would need to remain at the St George's Terrace and James Street sites of the Perth Technical College.²⁷

Architect Vin Davies envisaged the first stage being completed by 1964-5. By January 1963 he had completed site planning, and prepared plans and

specifications for the chemistry building, estimated at £250,000. The Public Works architect, John Oldham, assumed responsibility for design of the grounds, with forester George Nunn nominating areas for the selective clearing of pines. Alfred Pate and Frank Leroux were commissioned as quantity surveyors, while road construction was the responsibility of the Perth City Council.²⁸

Martin and Wark Reports

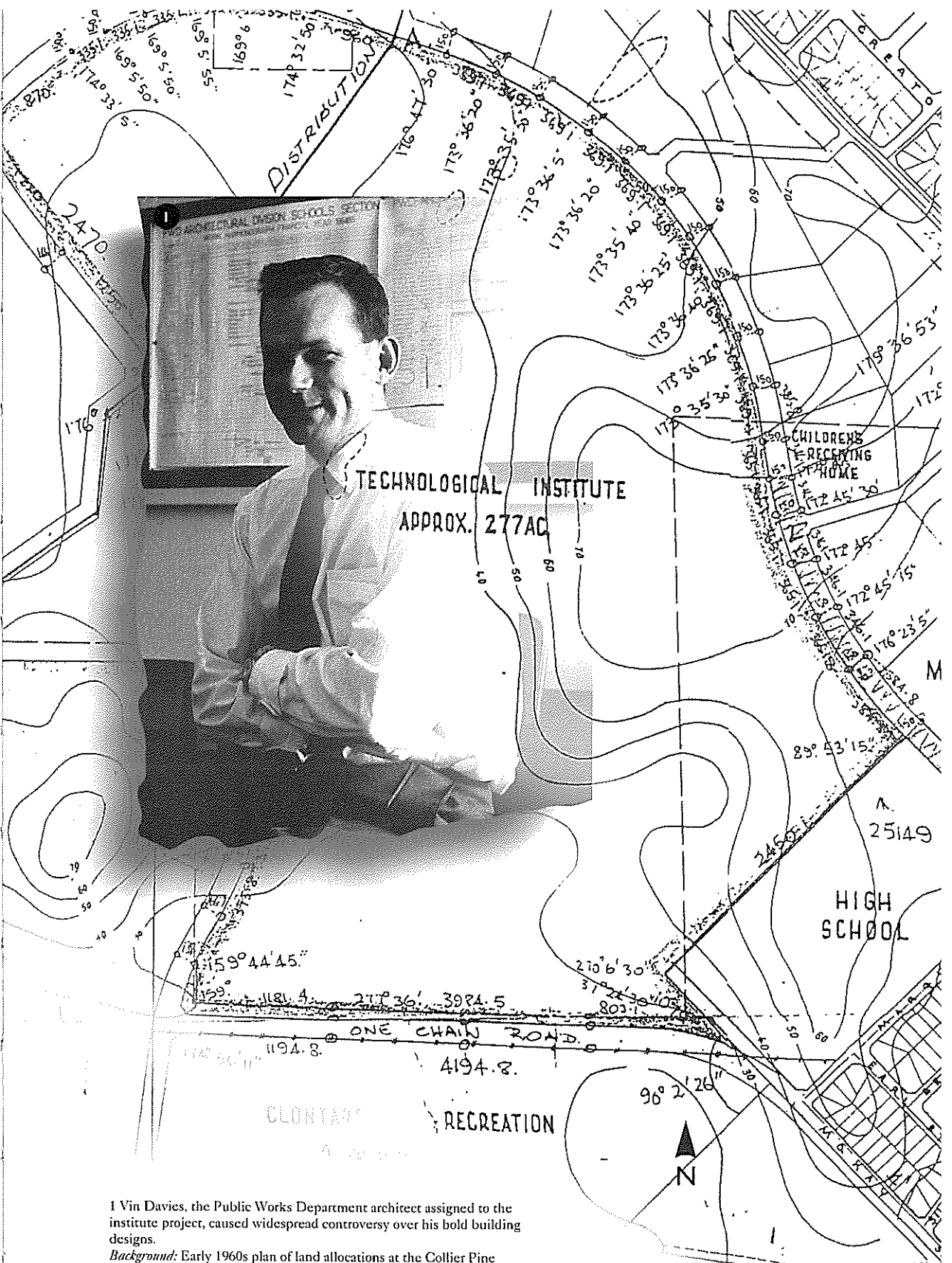
Developments at the Perth Technical College and other tertiary institutions occurred against a background dominated by the Martin inquiry, which had commenced in 1961.²⁹ Planning in the Education Department ground to a halt during 1964 while officials awaited the Martin committee's report and the Commonwealth policy that would be based on it. Neither Robertson nor Williams were confident of the outcome, being convinced that the committee members lacked knowledge of technical education in the States. Efforts to rectify this situation, however, had come to nothing.

In the event, the Commonwealth accepted only parts of the Martin Report, agreeing to extend capital and recurrent monies to the States to develop technological institutions while avoiding involvement in teacher education. A Commonwealth Advisory Committee on Advanced Education (CACAE) was established in 1965 to perform advisory, planning and co-ordinating functions for the 'advanced' education sector. Although lacking the statutory status of the Australian Universities Commission, the CACAE benefited considerably from the appointment of a former Commonwealth Scientific and Industrial Research Organisation (CSIRO) scientist, Sir Ian Wark, as its inaugural chairperson. Most importantly for WAIT, its foundation membership also included Dr Haydn Stanley Williams.

It was the Wark committee that coined the term 'college of advanced education' (CAE) to describe institutions falling within the non-university sector of tertiary education.³⁰ Commonwealth financial assistance to the colleges was similar to that applying to universities, involving triennial grants to the States on a matching basis. Under these arrangements the Martin and Wark committees laid the basis of a 'binary' system of tertiary education in which colleges were to pursue functions different from those of universities, but to achieve a parity of status with them.

Both committees were acutely aware that the upgrading of non-university institutions would take place in the shadow of almost overpowering university models of higher education. Commonwealth strategies therefore emphasised:

- the need to retain diversity;
- resistance to the emergence of degree courses outside the universities;
- the preservation of admission and award flexibility, especially a commitment to part-time and external students;
- the practical and applied orientation of college functions;



1 Vin Davies, the Public Works Department architect assigned to the institute project, caused widespread controversy over his bold building designs.
 Background: Early 1960s plan of land allocations at the Collier Pine Plantation site. ©State of WA

- a concentration on teaching rather than research among college staff; and
- community service as distinct from disinterested scholarship.

The binary philosophy and its funding consequences have been controversial since 1965; but the broad concepts accepted at the time were much in line with the thinking of Williams, expressed in his submissions to the Murray and Martin committees and in numerous other public forums. As a member of the Wark committee, Williams gained national visibility that also helped WAIT achieve recognition beyond the borders of Western Australia. From within the Wark committee, Williams contributed to the formulation of benchmark policies in advanced education that spelt out the financial needs of the college sector for the triennial periods 1967/69 and 1970/72.

In the meantime, the Commonwealth agreed to extend an interim grant during 1965/66 to institutions identified as needing urgent capital support. In Western Australia the sums involved were £1,750,000 at WAIT and £246,000 at the School of Mines (which would encompass matched grants by the Commonwealth government and the State government). Williams and Robertson's acquaintance with Commonwealth and State decision-makers and procedures smoothed the way for acceptance of Western Australia's submissions. Indeed Williams co-ordinated the project development undertaken, and also masterminded preparation of submissions—encompassing all the State's institutions concerned—that were presented to the Wark committee in 1966. The money could be spent quickly and effectively, since the government had already begun redevelopment of the School of Mines; at WAIT the first construction stage was near completion and planning well advanced on later stages. The State, moreover, was willing to find its share to match the Commonwealth commitment.

Interim Grant and First Triennium

Detailed submissions covering the interim grant period (1965/66) and also the triennium 1967/69 were quickly drawn up by the Education Department. Under-Treasurer Townsing, appreciating the new financial situation, asked Robertson to consider reordering priorities to bring forward construction of the expensive engineering buildings at Bentley. Robertson demurred, arguing that stage 1 was already in progress and detailed plans for stage 2 completed. To re-order priorities now would put at risk what was readily achievable while, in any event, it would take most of the interim grant period to undertake the design task for the engineering buildings.

The Commonwealth government in August 1965 accepted projects for stages 3 and 4 at WAIT, involving construction of student facilities, administration, the main hall, (architecture) and home economics. Also approved was expenditure of £130,000 for major equipment in the applied sciences and £500,000 for work on stages 3 and 4.³¹

The impact in Western Australia of Commonwealth interventions in advanced education may be gauged from a 1965 summary of building progress (Table 1.2) and an outline of anticipated spending (Table 1.3) from both Commonwealth and State funds, prepared by Robertson for the State Treasury in June 1965.

TABLE 1.2 WAIT: Summary of current building programmes, June 1965	
Building Complex	Estimated Cost (£)
Chemistry, pharmacy, medical ancillary	500,000
Mathematics, physics	50,000
Student union, hall and administration	400,000
Architecture	250,000
Library	200,000
Engineering	1,000,000
Home economics	100,000

Source: K. Townsing to I. Wark, 5 November 1965, Treasury Dept file 65/66.

TABLE 1.3 Estimated combined Commonwealth and State expenditure (£), 1965-7		
Item	Financial Year	
	1965/66	1966/67
Equipment for chemistry	70,000	
Equipment for physics and mathematics	60,000	
Student union, hall and administration	200,000	200,000
Architecture	170,000	80,000
Library (first section)		100,000
Engineering (first section)		120,000
TOTAL	500,000	500,000

Source: K. Townsing to I. Wark, 5 November 1965, Treasury Dept file 65/66.

Dr John de Laeter grasped an excellent opportunity to seek expensive equipment items for physics and chemistry that would assist WAIT in advanced work and directly benefit the State's mining industries through co-operative research with such bodies as the State's Geological Survey, the CSIRO and mining companies. This equipment, including a mass spectrometer and an electron microscope, revolutionised work in the applied sciences. The equipment also complemented technologies available at UWA, provided analytical services for industry and did much to help attract good academic staff.³²

The budgeting process in 1965/66 proved extremely useful in honing the State's submissions to the Wark committee for the 1967/69 triennium. In particular, greater control over costs by the Public Works Department was shown to be necessary. Due to the haste involved in the interim grant period, the department had under-estimated costs for the administration building and for projects at the School of Mines.³³

Official Opening

WAIT was formally opened on 17 August 1966 as a featured event of Technical Training Year in Western Australia.³⁴ This was a tripartite venture involving the State government, industry and commerce, co-ordinated by a committee chaired by Williams as director of technical education. Public lectures, seminars, displays and exhibitions were designed to drive home the economic importance of technical training, the facilities and opportunities available and the range of government support for industry. Events built up gradually towards a Pan-Indian Ocean Conference on Technical Education and Training, held in Perth 14–16 August, which attracted visitors from other Australian States and from seventeen countries in the region.³⁵

Many of the conference delegates travelled out to Bentley to attend the official opening of WAIT by Premier Brand. Other addresses were given by the principal of the Perth Technical College, Leslie James Hollis; the minister for education, Lewis; and the director-general of education, Robertson. An impressive brochure was produced containing colour photographs of the new institute buildings, and visitors were shown over the Bentley campus.

In view of the national publicity surrounding the Martin Report, and given the State government's quick response to the interim grant, and its intention to appoint a committee to review tertiary education in Western Australia itself, it was with some dismay that the Perth Technical College staff listened to Brand's address. This depicted the new institute as a training ground for super tradesmen and technicians rather than for professionals and technologists. It was apparent that at the political level there was little understanding of the higher education mission planned for WAIT by its chief protagonists, Robertson and Williams. Clearly, in the years to come, the institute's inaugural staff would need to spell out that mission and sell it to the local community.

Jackson Committee

Only a few days before the opening, the Brand Government announced that a committee chaired by Sir Lawrence Jackson would report on the future of tertiary education in Western Australia. Robertson had pressed for such an inquiry years earlier when a second university in Western Australia was under consideration, but action had been shelved when the Martin committee was appointed. He had again approached his minister during April 1965, suggesting terms of reference and possible committee membership, at the time when the Martin Report had been released and a State election was pending.

Cabinet approval had quickly followed, but nothing further had materialised. By March 1966 Robertson had become disturbed by the official inaction, since findings of the inquiry would be critical to the shape of State submissions to the Wark committee. In August an exasperated Robertson pressed his minister for decisions about WAIT's governance and staffing. He pointed out that '...even if the committee were appointed within the next two or three weeks, it could hardly deal with matters in time to meet the Commonwealth guidelines'. In his view the required legislation should be drafted immediately and referred to the committee for review. Alternatively, if the '...committee were not set up to deal with the matter in the present session of parliament, the bill should be proceeded with in this session'.³⁶

On the matter of governance, Robertson drew strength from the Martin committee's appeal to boost the status of senior technical institutions in Australia. To this end Robertson urged that the new WAIT should be an autonomous institution:

Unfortunately...it is difficult for any institution not having autonomy from Departmental control to establish a status in the eyes of the community appropriate to a tertiary educational establishment. Professional bodies, on whose co-operation in advisory committees the success of the institution considerably depends, are getting very restive on this matter as well as on the problems of recruitment, the methods of appointment, and the delays in the purchase and supply of essential equipment which seem to be inevitably bound up with this.³⁷

Autonomy would also ensure that staff positions would be advertised openly, a policy which:

...is considered essential to the proper development of the senior technical colleges as tertiary institutions. If appropriately trained and experienced staff are to be obtained from industry and other sources, particularly for senior positions, it is essential that appeals should not be allowed against appointments. These positions, therefore, must be removed from the purview of the State School Teachers Tribunal which hears appeals for all positions under the Education Act. The present system would tend to favour present employees of the Department irrespective of other qualifications and by its nature discourage outside appointments.³⁸

Robertson further argued for closer parity with university salaries. Speedy resolution of staffing policy was needed because WAIT would face stiff competition at a time when all States were quickly expanding non-university tertiary education. Some of these were already appointing senior staff at higher salary levels. Robertson further pointed out that because of the rapid changes taking place, the Education Department had avoided making permanent appointments at senior staff levels in the Perth Technical College. He nevertheless argued that in spite of the morale problems being experienced as a consequence, no commitments to present staff should be made without '...testing the field under any improved salaries and conditions which may apply'.

Robertson's appeal had the desired effect. On 9 August 1966 the government convened the long-awaited committee under terms of reference ranging widely

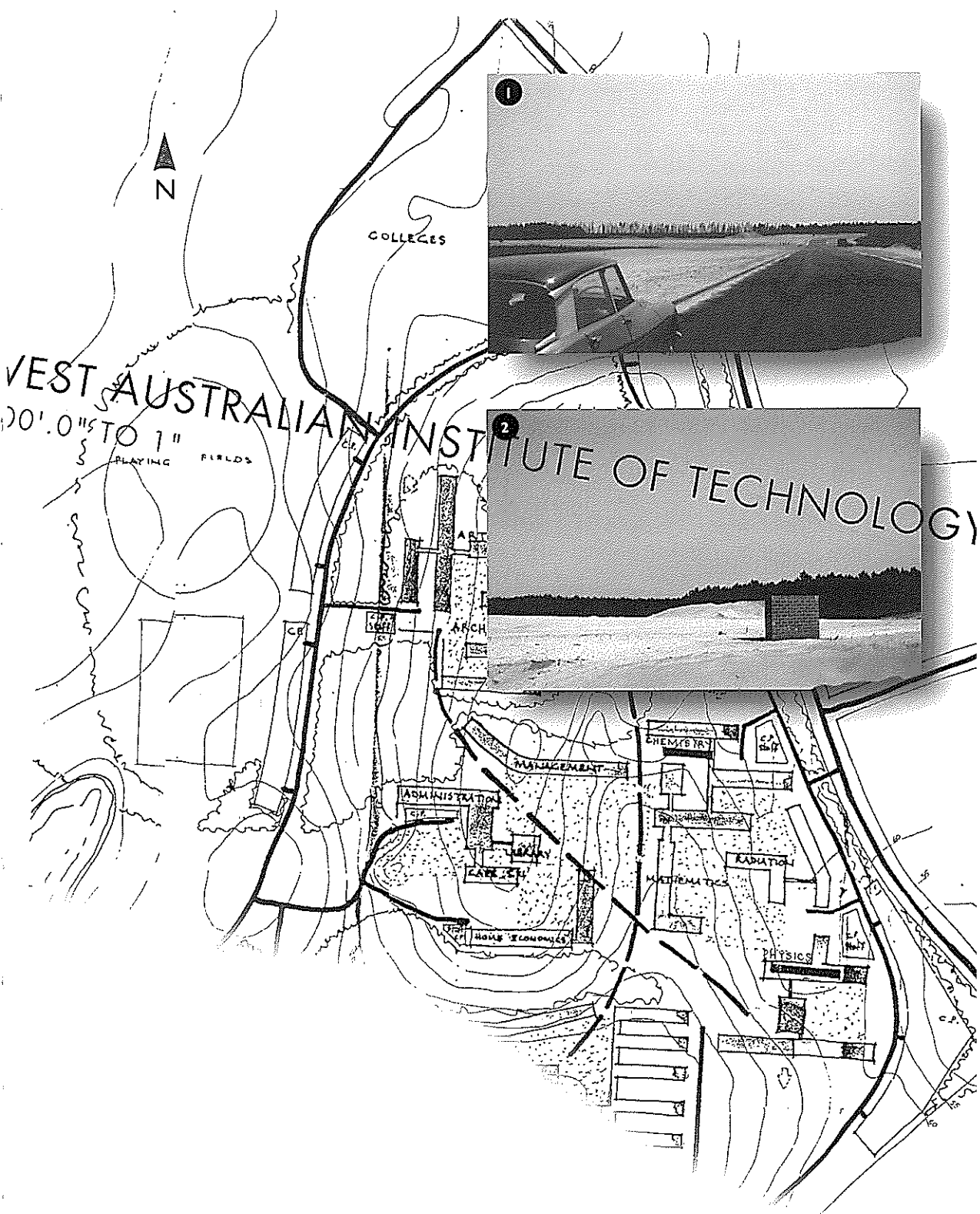
across the significant issues. These included the governance of tertiary institutions, their future roles and development, interrelationships and academic standards, and any ‘...other matters relating to tertiary education that might have implications for Western Australia’.³⁹

Within days of its formation, Robertson requested the committee to consider legislation to establish WAIT as an independent institution.⁴⁰ An appropriate Bill, he urged, should articulate the broad purposes of the institute, set up a council and define its powers. In October the committee agreed unanimously that WAIT should have its own Act of Parliament and be governed by a suitably constituted council. In an interim report issued at the time, the committee outlined its reasons for advocating autonomy for the institute, following almost to the letter the reasons advanced earlier by Robertson. These related to matters of status, acceptance by the community and the professions, support from industry and closer relationships with other institutions, the recruitment of staff by open advertisement, and freedom from Education Department administrative control.⁴¹

The interim report also detailed the composition and powers of the institute’s council, which was to include fifteen members: six representatives from industry and professional bodies, the director-general of education or nominee, the director of technical education, the under-treasurer or nominee, the chief officer of the institute, a university representative appointed by the university’s Senate, two institute academic staff elected by the staff, and two co-opted members. Should branches of the institute be established, each would have a representative as well. In the meantime, an interim council to serve for two years would be appointed.

The necessary legislation was quickly drafted and *The Western Australian Institute of Technology Act 1966* received assent on 12 December. Under the Act WAIT’s purposes were defined as follows:

1. to provide facilities for higher specialised instruction and to advance training in the various branches of technology and science;
2. to aid the advancement, development and practical application to industry of science or any techniques;
3. to encourage and provide facilities for the development and improvement of tertiary education, whether on a full-time or part-time basis, to meet the needs of the community in the State;
4. to provide such other courses as may be approved by the institute council;
5. to foster the general welfare and development of all enrolled students;
6. subject to the Act and the statutes, to award appropriate diplomas or certificates to enrolled students who have attained standards approved by the institute in examinations and to other persons as prescribed; and
7. to provide such facilities relating to the foregoing objects as the council thinks necessary or conducive for their attainment.⁴²



1 Looking in a north-westerly direction along Hayman Road in 1963, the year construction of the new institute started.

2 The first structure at the Bentley site—a sample panel of brickwork, 1963.

Background: Vin Davies' site plan of the proposed institute of technology, dated 6 July 1962. ©State of WA

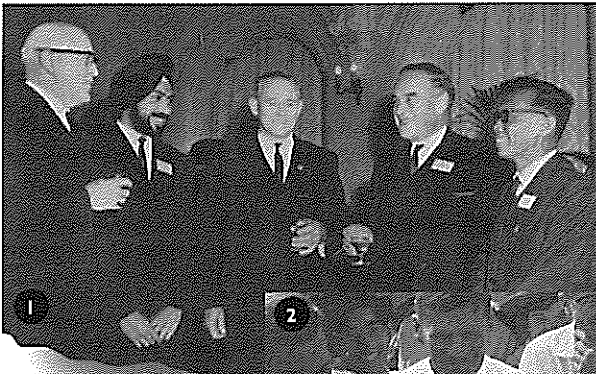
WESTERN AUSTRALIAN INSTITUTE
OF TECHNOLOGY



Official Opening

BY

THE HON. DAVID BRAND, M.L.A., LL.D. (Hon.)
Premier of Western Australia



1966



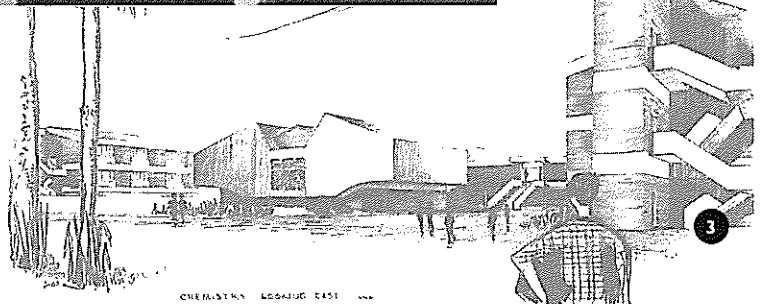
1 A State government reception for the Pan-Indian Ocean Conference on Technical Education and Training, August 1966, was hosted by Premier (later Sir) David Brand (*centre*). Conference Chairperson Dr Thomas Logan ('Blue') Robertson is on the extreme left, talking with three overseas delegates.

2 American astronaut Colonel Frank Borman addressed students at WAIT's Bentley campus on the opening day of Technical Training Year, 8 March 1966.

3 Vin Davies' concept sketch of the chemistry building.

Background: Invitation to the opening of WAIT.

Overlay: Logo of Technical Training Year in WA, 1966.



Institute autonomy under the Act included ‘...the entire control and management of the affairs, concerns and properties’ of the institution. It was circumscribed, however, by the requirement that the council gain approval of the minister for education for staff salaries and conditions and for the annual budget. The council was also required to report annually to the minister. Except for these provisos, the institute gained powers similar to those of UWA.

The first institute Interim Council meeting was held on 22 February 1967 in the staff-room of the Mathematics Department at Bentley. Chaired by Robertson, who had just completed his long period of office as director-general of education, the Interim Council continued to meet for nine months before the final report of the Jackson committee was released in September 1967. In the report the committee reviewed current thought about tertiary education developments in Australia, assessed its future growth and demand, described the work in existing institutions in Western Australia, and considered development possibilities in country areas. Of major importance were recommendations supporting the establishment of a Western Australian Tertiary Education Commission (WATEC) to advise the government on future development and co-ordination. The Jackson committee was firm in its belief that WAIT should complement rather than duplicate the role of UWA. Indeed it even suggested that WAIT be renamed the Western Australian College of Advanced Education, in accordance with the Wark committee’s terminology.

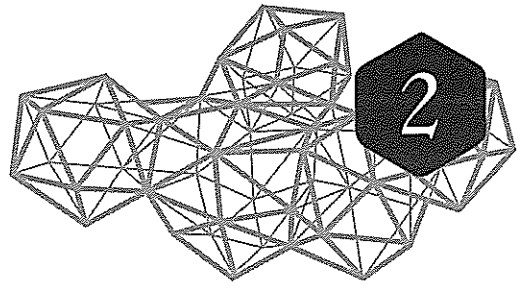
The Jackson committee further proposed that the Muresk Agricultural College become a branch of WAIT. This would remove Muresk from control by the State Department of Agriculture, boost the academic status of courses and enable recruitment of the best staff. With respect to the School of Mines the committee advised that it should be removed from control by the Mines Department and become an autonomous college governed by its own council.

The committee also dealt with the future of two small schools: one which was for training physiotherapists, and the other for occupational therapists. Their development is described elsewhere in this volume. The committee advocated setting up a school for the physical therapies at Shenton Park. Administered by WAIT, the school would be managed by an advisory committee comprising representatives of relevant government, professional and educational organisations. The committee also supported the rationale that a proposed branch of the Australian College of Nursing would gain strength and academic breadth if located at WAIT.

The report was particularly significant for WAIT’s future in three main areas. The first concerned arrangements for paramedical (or medical ancillary) training including dietetics, medical laboratory technology, nursing, occupational therapy, optometry, pharmacy, physiotherapy, radiological technology, speech therapy and chiropody. A second area concerned the development of professional training in management, architecture and town planning, computing, banking, cartography–surveying, engineering, journalism, librarianship, building and others. WAIT’s potential to meet needs in all these areas was obvious, although UWA was also involved in many of them. A third

area, with significant implications for WAIT's development, was the committee's recommendation that UWA not grow beyond about 8,000 full-time and 2,000 part-time students. It also recommended that UWA start planning for the establishment of a university college to be opened in the 1973/75 triennium. Privately Robertson and Townsing remained unconvinced that a college or a second university was needed, seeing such development as an unnecessary duplication of scarce resources.

The passing of the WAIT Act in 1966 formally established the new institute as a separate entity from the Perth Technical College, under an Interim Council charged with establishing the foundation upon which a full council could later build. The basis of this was spelt out in the Jackson committee's interim report. So quickly had events moved, however, that the committee's secretary, Brian Hill, who was later professor of education at Murdoch University, ten years afterwards accused Robertson of 'bulldozing' his idea of the institute through the committee.⁴³ This opinion does less than justice to the contributions of other—and very influential—committee members. However, there is no question that Robertson, with Williams, were the driving forces behind the recommendations and the eventual WAIT Act. The ground-work had been laid during more than ten years of careful preparation and policy development, the value of which was borne out by Commonwealth and State acceptance of the financial responsibility for developing the institute. This enabled WAIT to commence operation as a new institution, located on a specially selected campus with purpose-designed buildings and facilities, and in accordance with a well-articulated institutional philosophy.



Government, Organisation, Finance, Planning

In its first few years as an independent institution, WAIT quickly established the organisational infrastructure for its academic operations. The Interim Council appointed the inaugural academic and administrative leaders, who then began establishing a management structure suited to the educational mission of the nation's newest CAE. At the same time, financial operations were transferred from the Education Department while building proceeded at break-neck speed to cope with a remarkable growth in the student population at Bentley. It was at this early stage that WAIT laid the foundation of a sound administration, able to capitalise upon political goodwill and the financial opportunities available in the late 1960s.

Between 1967 and 1975, WAIT's enrolment grew from nearly 2,000 to 10,000. Even a cursory examination of statistics for the period shows that a major factor in this spectacular growth was enrolments in accounting and business, administrative studies, general studies, and art and design. Other large departments included architecture, the three engineering specialisations, chemistry and physics. From 1969 WAIT also gained enrolments from the School of Mines, Muresk Agricultural College and the therapies schools, while the addition of teacher education and nursing in 1975 added nearly 1,000 students in one year.

The reasons for this rapid expansion are complex. Western Australia's economic boom was undoubtedly important in this connection. However, the mineral boom virtually collapsed after 1971. Levels of economic activity were sustained by heavy Commonwealth spending during the first years of the Whitlam Labor Government, elected in 1972. Manufacturing production in Western Australia grew quickly during the period, although it was accompanied by relatively small employment growth in secondary industry. Employment expansion did occur in financial services and in health, education and welfare

services. This benefited training in such areas as business, health sciences and the social science-based occupations. By comparison, growth in the applied sciences and engineering was relatively modest. On the other hand, these areas were less affected by the impact of reduced government spending after 1974, which substantially reduced student demand for social science courses. WAIT continued to vigorously promote part-time and external enrolment, facilitating access to professional education. Its more flexible and sometimes lower admission levels, and an applied and vocational emphasis were far from a handicap in competing for students with UWA.

There were other factors involved, including the emergence of new professional groups in the service and welfare industries, and the restructuring of professional qualifications in such fields as accounting, engineering and the paramedical occupations. In responding enthusiastically to these demands, WAIT continued the work of the Perth Technical College but gave it new shape and academic status. It also involved the professional groups, industry, commerce and government in the whole process of planning, staffing and even financing many new ventures. In conducting applied research, short courses and consultancies, WAIT was also prepared to offer services which fell outside the realm of traditional university policy.

In any event, until 1973 WAIT comprised the entire advanced education sector in Western Australia. What was not available at UWA could be freely developed at WAIT without challenge from other institutions. It was not till later that problems of co-ordination and duplication became a major issue in Western Australia.

WAIT Council 1967–1975

Until 1966, when WAIT became an autonomous institution under its own council, all technical education in Western Australia was controlled as part of the State Education Department. The Perth Technical College formed part, albeit the most significant part, of the technical education system. Leslie William Phillips, in the late 1930s, was well aware of the need to break out of this public service bureaucracy so that technical education could establish more direct links with its constituencies. The need became more pressing once the Perth Technical College, in keeping with his long-term plans, crystallised into a tertiary institution providing education at the professional level. The situation became urgent once decisions were taken to establish WAIT as a new institution.

Within the constraints of Education Department administration, efforts were made in the 1950s to create an academic organisation more in keeping with the special needs of higher professional education. This started with improvements to the status of a Perth Technical College Council of Studies, which was given a more prominent role in advice concerning academic policy. The introduction of professional advisory committees for each professional training field was another measure designed to promote direct contact with employers and professional societies.¹



BRANCH, Jubilee Celebrations
EDUCATION DEPAR
1951
COLLEGE
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1 Perth Technical College Council of Studies, 1951. *Back (left to right):* Percy I. Hunt (art); W. H. ('Robbie') Robertson (architecture); Dr Haydn Stanley Williams (student counselling); Cecil Emil Carr (management); I. F. Outtrim (registrar); A. B. Davies (trades); Leslie James Hollis (commerce); Erich Walter Shilbury (engineering). *Front:* G. M. Dear (trades); A. P. (Percy) Ffarrington (deputy principal); Ray Davis (principal); Elsa D. Gerrand (women's arts); Dr Eric M. Watson (chemistry).

Absent: Fred W. Faulkner (mathematics and physics).

Background: Commemorating the 50th anniversary of the Education Department's Technical Education Branch.

By 1962 the Technical Education Division was paying even closer attention to modes of organisation that would better fit the needs of a tertiary institution. In 1963, Perth Technical College Principal Hollis circulated to a restricted audience a paper outlining the possible formation of a college advisory council that could be later reshaped as a suitable governing body for an independent institution. He also strongly advocated breaking down the excessive centralisation of decision-making and administration commonly associated with the Technical Education Division.² Cognisance of this problem was evident when in 1964 the Education Department introduced at the college the positions of deputy principal and assistant principal. The deputy became responsible for engineering, architecture and applied science—all then concentrated on the St George's Terrace site. The assistant, located at the James Street site, was responsible for commerce, general studies, art and home economics.³

Robertson, as already described, was determined to see reform go much further—to embrace statutory independence and the appointment of academic staff outside the constraints of public service regulations. His backing of autonomy for WAIT was crucial to the principle gaining acceptance in the Jackson committee and in State government circles. Establishment of the institute Interim Council was the immediate outcome.

The first meeting of WAIT's Interim Council, on 22 February 1967, was opened officially by the minister for education, Lewis. Lewis emphasised in his address the government's determination that WAIT should not duplicate but complement the purposes and programmes of UWA, by concentrating more on part-time studies, especially in scientific fields; maintaining a more applied emphasis; forging direct links with industry; focusing on teaching excellence; and emphasising undergraduate training.⁴

The points were well taken by Robertson and Williams, who strongly endorsed the advanced education philosophy. There had been a few sceptics. During the parliamentary debates on the WAIT Bill, Labor's Colin Jamieson had challenged the wisdom of granting autonomy which, he claimed, the State might later have cause to regret.⁵ He also predicted that WAIT would quickly pursue claims to university status and therefore undermine its own purpose.

Robertson almost instantly achieved a national standing in advanced education through his appointment as inaugural chairperson of the interim councils of both WAIT and the Canberra CAE.⁶ This brought him to Canberra one week each month, allowing him to mix regularly with key political decision-makers and to develop an invaluable national perspective of advanced education, shared perhaps only by Williams himself. Both men were influential in the Wark committee decision to bring to Australia Professor James MacConnell, from Stanford University, to advise on planning and campus development in Australia's CAEs.⁷

At WAIT Robertson retained an office in the administration block, exerting a presence more pervasive than was perhaps appropriate for a chairperson of council. Contemporaries remember him cloaked in a positive aura of authority

as he swept past them in the corridors. At Canberra he appeared to function in a more traditional chairperson's role, although even there his authority and knowledge won respect.

Among the other Interim Council members, two represented the community interest: Roy Halliday Henderson, a senior partner in C. P. Bird and Associates, and president of the Perth Chamber of Commerce; and Lewis Edgar Elvey, a graduate of the Western Australian School of Mines in Kalgoorlie, who later served as chairperson of North Kalgurli (1912) Ltd and Westralian Oil Ltd, and as a director with Great Boulder G. M. Ltd, Hadfields (1934) Ltd and the Griffin Coal Mining Company. Between them they presented powerful voices from commerce and the mining industry.

They were joined by ex-officio members: H. W. Dettman, Robertson's deputy in the Education Department; and L. E. McCarrey, deputy under-treasurer of Western Australia, who provided invaluable support throughout the early years when the State government and Commonwealth government shared WAIT's capital and recurrent funding. W. J. Paterson, acting director of technical education, and Williams (officially director of technical education but now largely responsible for the co-ordination of advanced education in the State) were obvious interim appointments, while Sir Stanley Lewis Prescott, vice-chancellor of UWA, who was appointed to promote co-ordination between the two institutions, also protected the university's interests. During 1967 Dr A. H. (Harry) Nash joined the Interim Council as the elected staff representative.

The Interim Council worked under great pressure, with mid-afternoon meetings lasting late into the night. Three committees were established: staffing, buildings and finance. One notable innovation, introduced at Williams' suggestion as the pace of work eased, was to invite a significant institute group—for example, an assistant director and senior staff, or the Academic Staff Association (ASA) and later the Student Guild—to share their concerns with council members over dinner. To Williams' knowledge, such interaction was unique in higher education at the time.

The first meeting of the full WAIT Council, on 2 April 1969, contained four new government appointees: Frank W. Dawson, assistant director of Airways Engineering in Western Australia, and of the Commonwealth Department of Civil Aviation; E. N. Fitzpatrick, director of the Western Australian Department of Agriculture; Dr D. D. Letham, acting deputy commissioner of health of Western Australia; and Tom Gosling, general manager and a director of Laporte Titanium (Australia Star).

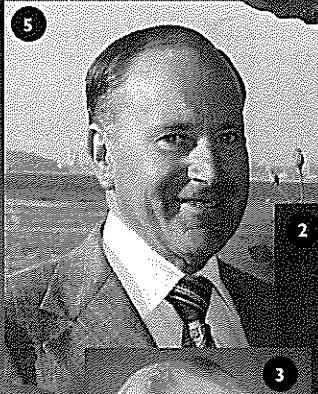
From the Interim Council, there were Henderson and Robertson, the latter being the unanimous choice as elected chairperson. New faces included two representatives elected by the ASA: Steve G. Forte, lecturer in mathematics; and Dr B. R. Hammond, senior lecturer in chemistry. Co-opted members included I. H. (Jack) Carne, general manager of Broken Hill Proprietary Co Ltd (BHP) in Western Australia, and vice-president of the Western Australian Chamber of Mines; and architect Mervyn Parry, a leader in post-war housing design in Western Australia.

Sadly, Robertson did not live to lead the new council for more than a few months. His sudden death from a heart attack, in September 1969, brought to an end an illustrious career in education and public service. Robertson left his stamp on every aspect of Western Australian education and played a significant role nationally with the Commonwealth Office of Education, the Australian Education Council, the DOCIT conference, the Australian Council for Educational Research and the Australian College of Education. The WAIT Council, at Williams' suggestion, decided to remember Robertson's contributions to WAIT in three ways: one was to name the new library after Robertson; another was to establish the T. L. Robertson Memorial Fund to equip the Robertson Library with suitable works of art; and the third was to commission a bust of Robertson, executed by Theodore (Ken) Hannen. The Robertson bust was placed at the entrance to the library, which was opened for use in March 1971.⁸

Henderson replaced Robertson as chairperson of the WAIT Council, while other membership changes followed the establishment in 1969 of the WATEC, responsible for advice to government on the planning and co-ordination of tertiary education in Western Australia. The UWA appointee was withdrawn, on the assumption that the vice-chancellor's representation on the new commission would ensure effective co-operation between WAIT and UWA.⁹ Formation of the WATEC also spelt the end of McCarrey's membership, since the State Treasury was represented on the commission. This was a serious loss, for McCarrey's participation at WAIT had been extremely helpful in keeping open lines of communication to the State Treasury.

The new council, in August 1969, adopted a different committee structure from that of the Interim Council and redistributed the responsibilities of previous committees. The object was for the council to function much as a board of directors, leaving detailed work to its subcommittees. The reorganisation induced some fears that the council might simply become a rubber stamp for its subcommittees. In another initiative, however, the council set up a committee to undertake a complete review of its roles and membership.

During 1974 the WAIT Council membership underwent a number of changes as appointments expired. Government nominees included: Dawson, for a second term; W. R. Dickinson, headmaster of Scotch College; Dr K. Currie, a district superintendent with the Education Department; Erica R. Underwood, a member of the Western Australian Arts Council, the Australian Broadcasting Commission's State advisory committee, and the Festival of Perth committee; and J. H. Barton, who replaced the recently retired director-general of education, H. W. Dettman. Dorothy E. (Dot) Goodrick, a public servant with the Community Welfare Department, was co-opted in 1974 to provide a voice for women's interests. These new members were nearly all associated with the arts, social welfare and education but the council lost a number of its prominent figures drawn from private enterprise and industry, who had helped WAIT achieve a telling presence in local business and industry.



1 Members of WAIT's first governing body, the Interim Council. *Back (left to right):* Dr A. H. (Harry) Nash, Sir Stanley Lewis Prescott, L. E. McCarrey, W. J. Paterson, Roy Halliday Henderson. *Front:* Dr Haydn Stanley Williams (WAIT director), Dr Thomas Logan ('Blue') Robertson (chairperson), Howard William Peters (council secretary).

Interim Council members absent:

- 2 H. W. Dettman;
- 3 Lewis Edgar Elvey.

4 Inaugural WAIT Council members. *Left to right:* L. E. McCarrey, Roy Halliday Henderson (deputy chairperson), W. B. Blown, Steve G. Forte (academic staff representative), Mervyn Parry, Dr Haydn Stanley Williams (WAIT director), Dr Thomas Logan ('Blue') Robertson (chairperson), Howard William Peters (council secretary), W. J. Paterson, Frank W. Dawson, E. N. Fitzpatrick, Dr B. R. Hammond (academic staff representative), Tom Gosling, Dr D. D. Letham.

WAIT Council members absent:

- 2 H. W. Dettman;
- 5 I. H. (Jack) Carne.

Senior Appointments

The institute Interim Council adopted an organisational pattern similar to that of the Perth Technical College. This involved a director and three assistant directors, each of the latter responsible for co-ordinating the teaching and resources of departments grouped into areas, later called divisions. The Interim Council also appointed to the institute an administrative secretary, responsible for the organisation and administration of WAIT.

The Interim Council appointed Williams as inaugural director of WAIT. Many contemporaries were surprised at Williams' decision to apply for the post, having assumed that the post of director of technical education would have carried more prestige; but he had developed a vision of WAIT, a consequence of his long-standing policy role and his knowledge of national and international developments in higher education. Personal strengths—integrity, a daunting capacity for work and the ability to communicate ideas—combined with a wide circle of contacts in the State and federal arenas placed Williams in an ideal position to lead the new institute into an exciting period of development.

Dr A. H. (Harry) Nash was appointed assistant director (architecture, art and engineering).¹⁰ From 1966 Nash had served as assistant principal of the Perth Technical College, responsible for engineering. He came to his new post combining a professional interest in engineering with an academic involvement in education. His special interest lay in educational television, in both its technological and educational aspects. Whilst at WAIT Nash served on education committees of the Institution of Engineers (Australia); worked closely with the United Nations Educational Scientific and Cultural Organisation (UNESCO) in Southeast Asia; and was eventually made a Fellow of the Australian College of Education. An indefatigable traveller, he kept the Division of Architecture, Art and Engineering in touch with international trends in engineering education. His initial task, however, was to integrate the various engineering departments while planning for their transfer into new buildings. This proved a daunting and sometimes exasperating responsibility, which was complicated by an incongruous portfolio combining engineering with art and architecture—an alliance of disparate interests that would have tested the diplomatic skills of a Tallyrand.

The Interim Council appointed Dr Norman Francis Dufty to the position of assistant director (commerce and general studies).¹¹ Dufty's background epitomised that of WAIT's early staff. Born in Sheffield in 1919, he left school at the age of fifteen to work as a chemist with the Vickers Company and later as a management trainee with United Steel. In 1941, prior to war service with Coastal and Middle East Commands, he worked as a foreman in the Bymlo Steel Company, Wrexham, in Wales. While there Dufty completed part-time studies towards an associateship in metallurgy of the University of Sheffield.

After the war Dufty migrated to Canada in search of greater opportunities. Canada's winters quickly led him, after a short stint as casting pit superintendent with the Algoma Steel Corporation, to seek refuge in Australia's sunlight, at first with Australian Iron and Steel (BHP) at Port Kembla in New

South Wales. Shifting into management consulting with W. D. Scott, he visited Perth in 1953 on a job from Sydney and never returned there. He joined the Perth Technical College as a senior lecturer in metallurgy.

At the college Dufty shifted his interests to management training with Cecil Emil Carr, whom he succeeded as head of department in 1957. Dufty launched himself immediately into part-time studies towards an arts degree majoring in economics, followed by work under a Fulbright Scholarship towards an MA in industrial relations at the University of Illinois. Back in Perth he finished a PhD in economics and an MEd degree, both by part-time study. During this time Dufty also served a two-year stint (1962–3) as a principal member of Management Development Division of the International Labour Organisation in Geneva. Dufty returned to Perth in 1964 when offered the post of assistant principal, commerce and general studies, at the Perth Technical College. At the time of his appointment to WAIT, he was on long-service leave as visiting professor in industrial relations at the University of Wisconsin.

Dufty by this stage was one of Australia's foremost management and labour relations specialists, with extensive publications in the field. His many-faceted career had encompassed work from the shop floor to management in industry, as well as academic achievement (mostly as a part-time student) at the highest levels. His work background, coupled with a rather belligerent Yorkshire temperament, provoked mixed reactions among his contemporaries. They variously regarded him as creative, imaginative, fearless, thoughtful and sensitive, or as brash, cynical, abrasive, 'rough as guts' and stubborn. With the irrepressible energy of the self-made man, Dufty made a substantial impact upon WAIT in a career that ended with his retirement in 1985.

Dr Ronald (Alan) Coombe, an Englishman educated at Harrow and Oxford, was the only assistant director appointed from outside the ranks of previous Perth Technical College staff.¹² A physicist, Coombe at thirty-one years of age brought to the post of assistant director (applied science) a wide range of research, publication, teaching and professional experience. A fiery-tempered workaholic, Coombe was respected rather than liked at WAIT, although few questioned his obvious ability.

In appointing Howard William Peters as the inaugural administrative secretary of WAIT, the Interim Council took a particularly bold step. Born in 1922 and educated in London, Peters was aged forty-four when he joined WAIT after a remarkably varied career as a journalist with the *Manchester Guardian* (1940–57) and later as a manager in industry. With H. L. Brisbane and Wunderlich Ltd in Perth, he served at different times as stock and production controller, methods and systems officer, electronic data processing officer and executive assistant to management. He also had experience as secretary and manager of a subsidiary company and as managing director of Maryland Plastics Ltd, from which he resigned in 1967. As a part-time student, Peters completed the Perth Technical College diploma of management studies under Cecil Emil Carr, with distinctions in nearly every subject and two prizes for excellence.¹³

Peters proved an outstanding appointment. Despite his lack of formal higher education, he possessed a keen intellect, impressive powers of communication and a capacity for work that was to become legendary at WAIT. His talent unsettled a few senior academics who resented his refusal to separate academic policy, administration and finance. A complex personality, Peters fully exercised his talents while subjected to keenly felt slights from academics about his lack of formal qualifications. With Williams, however, Peters created a powerful administrative operation that placed WAIT among the best managed institutions in the nation.

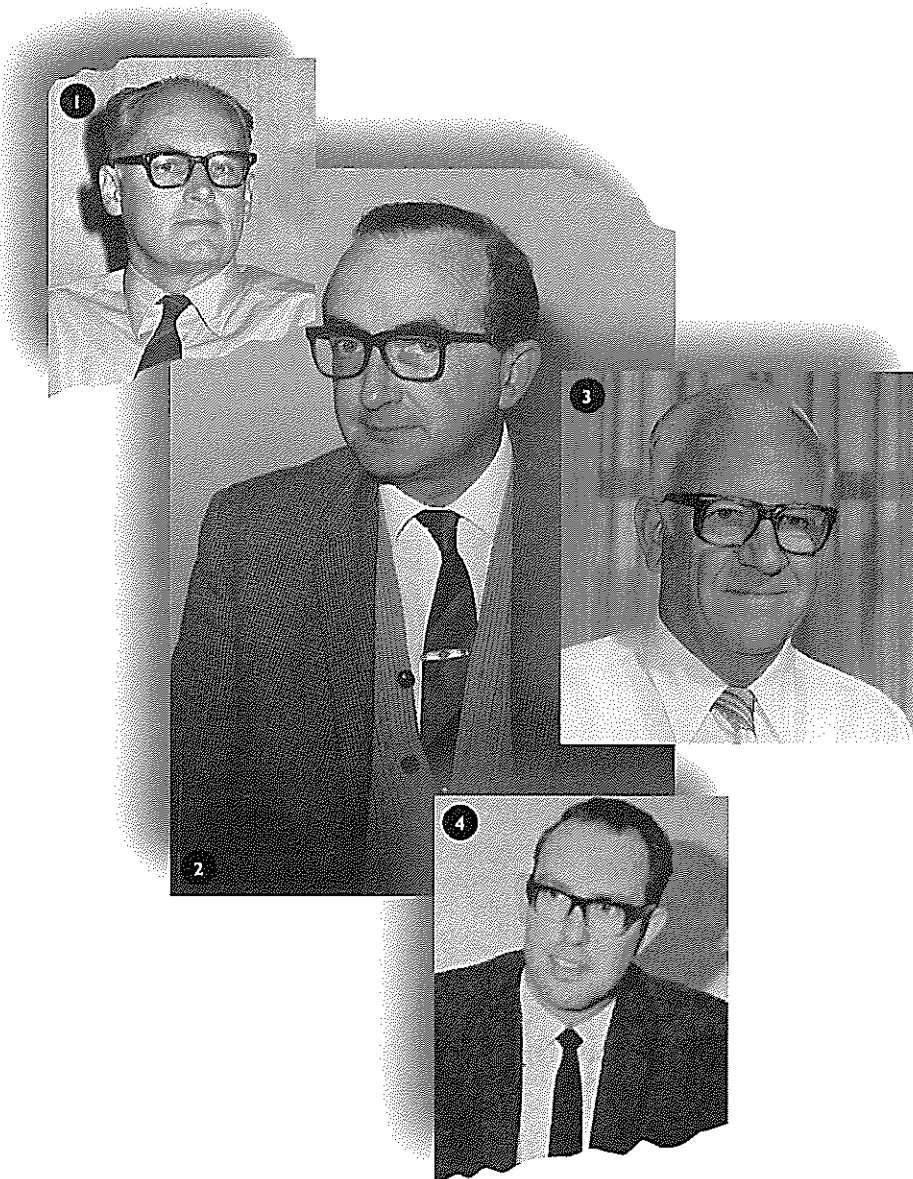
When it came to academic appointments at head of department and lower levels, the Interim Council rode out public controversies about WAIT's policies of open advertisement. Advertisements prior to 1967 mentioned the Institute of Technology, but the appointments were all to the State Education Department, and public controversy accompanied a number of resignations and early retirements. Minister for Education Lewis and Interim Council Chairperson Robertson faced down the public criticism, which became strident during late 1967 as WAIT prepared for its new organisation.¹⁴

The Interim Council also faced down Teachers' Union complaints about conditions of employment. Annual holidays were reduced from twelve weeks to four weeks, while salaries were set 'at a safe margin' below university levels, but slightly above those in the Technical Education Division. According to the union, this did little to compensate staff for loss of vacation time, with no offset in sabbatical leave rights. Institute staff also lacked representation by a strong union.¹⁵

Advertisement for the senior positions drew a large field of international applicants, but the response for the head of department positions was less promising. The first departmental heads appointed were Colin Sears (accounting and business studies), Stan T. Waddell (mathematics), Alan G. Cook (electrical engineering), W. L. A. Munro (mechanical engineering), Gordon T. Myles (civil engineering), Dr John de Laeter (physics), and Geoffrey Allen (principal librarian). At the next Interim Council meeting (5 July 1967), others appointed were Arnold L. R. Camerer (architecture), Eric D. Atkinson (general studies), Cecil Emil Carr (administrative studies), A. K. (Tony) Russell (art), and E. J. (Jean) Callander (home economics and dietetics). Dr Marc Liveris was appointed head of the Department of Chemistry.¹⁶ It took some time to fill the post in pharmacy, which eventually went to Dr T. J. (John) Betts. He and Allen were the only appointees from outside the ranks of the Perth Technical College.

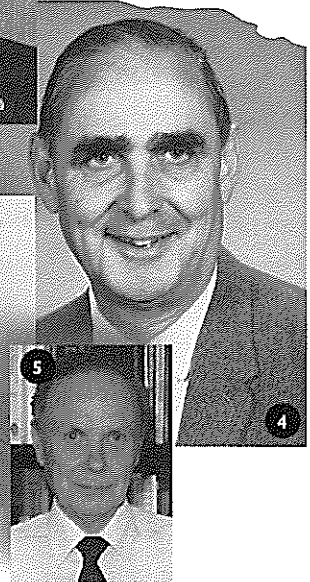
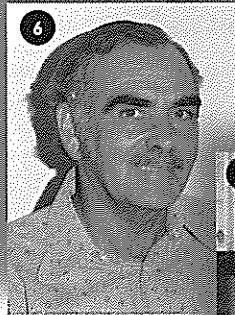
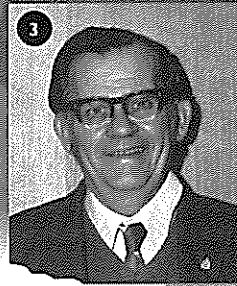
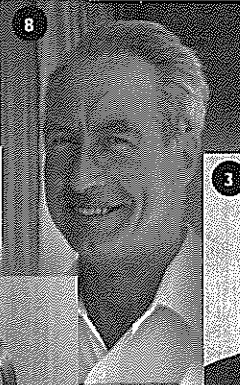
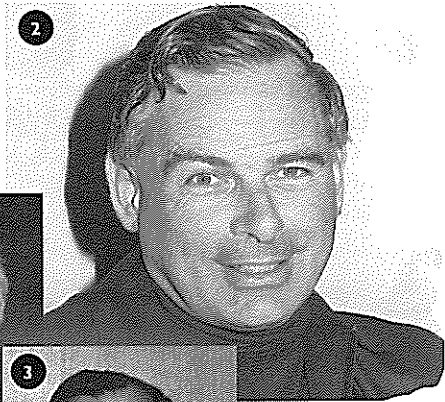
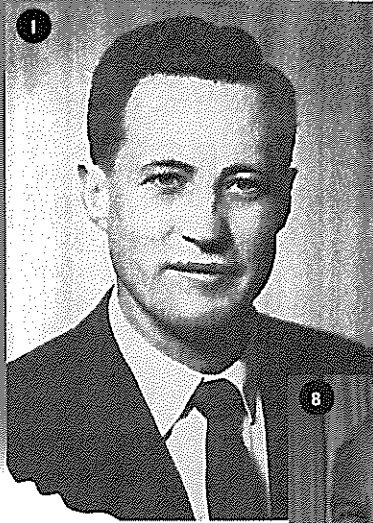
Management Structures

In September 1967 Williams, Nash, Sears, Waddell and Peters held the first meeting of what was later called the Management Board.¹⁷ During October Dufty and Coombe replaced Sears and Waddell, and the Management Board set about establishing a decision-making structure. Drawing on their own research, Dufty and Coombe provided extended submissions. Carr, fresh from an MA thesis on the organisation of the Perth Technical College, also submitted



WAIT'S TOP ACADEMIC AND ADMINISTRATIVE APPOINTMENTS, 1967

- 1 Dr Norman Francis Dufy, assistant director, commerce and general studies.
- 2 Howard William Peters, administrative secretary; later assistant director (administration and finance).
- 3 Dr A. H. (Harry) Nash, assistant director, architecture and engineering (later changed to architecture, art and engineering).
- 4 Dr Ronald (Alan) Coombe, assistant director, applied science; appointed deputy director, WAIT, 1969.



MOST OF WAIT'S FOUNDATION DEPARTMENTAL HEADS APPOINTED IN 1967 CAME FROM SIMILAR POSITIONS AT THE PERTH TECHNICAL COLLEGE

[Note: the previous headship at the college or other former position is shown in brackets]

1 Eric D. Atkinson (general studies), head of the Department of General Studies.

2 Geoffrey Allen (deputy librarian at UWA), principal librarian at WAIT.

3 Colin Sears (commerce), head of the Department of Accounting and Business Studies.

4 Gordon T. Myles (civil engineering), head of the Department of Civil Engineering.

5 Alan G. Cook (electrical engineering), head of the Department of Electrical Engineering.

6 Stan T. Waddell (mathematics), head of the Department of Mathematics.

7 Dr John de Laeter (physics), head of the Department of Physics.

8 W. L. A. Munro (mechanical engineering), head of the Department of Mechanical Engineering.

his ideas.¹⁸ The outcome was an interim structure comprising an institute Management Board, area management boards, an Academic Board, boards of study and advisory committees.¹⁹

The Management Board, comprising the director, assistant directors and the administrative secretary, was the central co-ordinating body of the institution. Its roles included advising the director on executive decisions, co-ordinating institute activities and forward planning, and preparation for the council and its committees. While ultimate responsibility lay with the director, Williams is remembered as having overruled the board only once, when he considered student interests were at risk.²⁰

The Management Board proposed the formation of an Academic Board to advise the director on overall institute academic policies. This body would include the director (chairperson), assistant directors, heads of departments and six academic staff members, three of whom were to represent the three locations of WAIT: at Bentley, St George's Terrace and James Street. The three boards of study then functioning at the Perth Technical College (architecture and engineering, applied science, and commerce and general studies) were replaced by three area management boards chaired by the respective assistant directors. New boards of study for each course were proposed and advisory committees were introduced to keep WAIT in touch with its professional and industrial constituencies.²¹

Williams' intentions behind this scheme were to achieve as much consultation as possible while retaining the ability to make decisions quickly and efficiently when needed. In his first address to WAIT staff in 1968, Williams asserted that ultimate control must be centralised for efficiency, although consultation was necessary to achieve the institutional objectives WAIT had been given under its Act. He contrasted this model with those applying in most universities, which in his view experienced a paralysis where ability to make firm and quick decisions was concerned.²²

During 1969 several organisational changes were initiated—partly as a consequence of State government decisions which are discussed later—to effect an amalgamation with WAIT of the Western Australian School of Mines, the Muresk Agricultural College and the therapies schools. A Planning Board was established, responsible mainly for preparing triennial submissions to the Commonwealth government. However, its membership was identical with that of the Management Board.²³ Area management boards (retitled area boards) were reconstituted and strengthened to promote forward planning, efficient administration and co-operation across the institute. The School of Mines, when it was merged with WAIT in 1969, was given its own area board, while Muresk college and the therapies schools gained representation on the Applied Science Area Board. Until 1971 this structure remained intact, apart from minor changes to nomenclature and to placement of departments with particular area boards. During 1969, for example, areas were renamed schools and then later divisions, and the assistant directors were renamed deans. The therapy and home economics departments also were removed from applied science and

placed with the Division of Commerce and General Studies. The Department of Art and Design, transferred to Bentley from James Street, was placed under a reconstituted division encompassing art and design, architecture and engineering.

Rapid growth at WAIT in the early years led to other significant changes. In August 1969 the council established the post of deputy director to which Coombe was appointed, with a view to providing the director Williams with much-needed support.²⁴ Dr Marc Liveris in 1971 replaced Coombe as dean of the Division of Applied Science. Earlier, the posts of administrative assistant (services) and administrative assistant (academic) had been created to service a mounting administrative burden. Peters' role shifted upwards as a consequence and his title was altered from administrative secretary to secretary. Later, in 1971, positions of assistant director (educational services) and assistant director (administration and finance) were established, with Peters moving to the latter post.²⁵

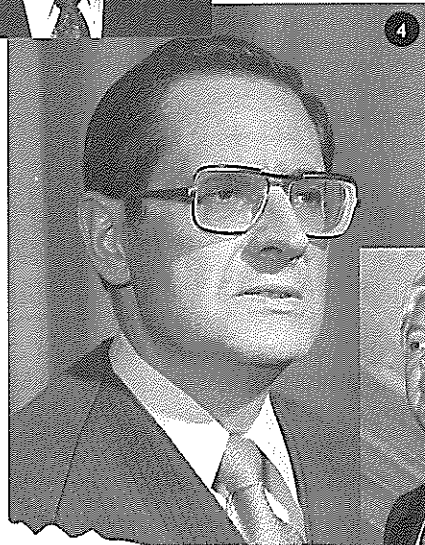
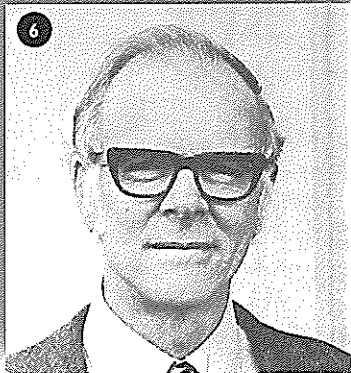
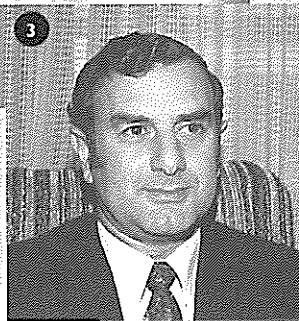
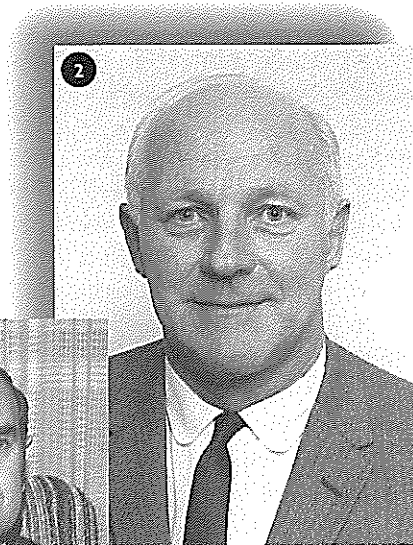
Compared with traditional universities, the WAIT organisation gave much more authority to its director and the three assistant directors. (The latter were the only WAIT staff paid salaries equivalent to a university professor.) The concentration of financial and administrative controls in the administrative secretary, later the assistant director (administration and finance), also placed WAIT's chief administrator in a much stronger position than a university registrar. The role was much like that of a deputy vice-chancellor (finance).

The advisory nature of most institute committees rankled from time to time with academic staff, and especially in relation to the Academic Board. The Academic Board's role in setting academic policy was strengthened in September 1969, however, and a standing committee on course structure was introduced to which all boards of study were to report.²⁶ It was also agreed that the Academic Board would elect three representatives to the education committee of the WAIT Council. Williams promoted the appointment of staff representatives to all council committees and later extended this principle to include student representatives. Malcolm Cunningham was appointed to the post of assistant secretary (academic) in 1971.

WAIT settled upon the three-year associateship course as the most appropriate to its functions. Early planning had envisaged a few diploma courses previously available at the Perth Technical College being retained at WAIT, especially those needing expensive equipment and specialised staff, but in the event, little of this occurred.²⁷ Indeed, during 1967–8, courses at this level were formally separated from the associateships and they became the sole responsibility of the Technical Education Division.

WAIT Administration

WAIT owed much of its initial success in attracting government funding and gaining a reputation for efficient management to the quality of its administrative personnel. This was another area to benefit from Williams' determination to upgrade services, compared with what had been available



ONE WOMAN FIGURED AMONG EARLY APPOINTMENTS TO HEAD WAIT DEPARTMENTS, 1967-8

[Note: where applicable the previous headship at the Perth Technical College is shown in brackets]

1 E. J. (Jean) Callander (home economics and dietetics), head of the Department of Home Economics, tried to broaden what was viewed as a limiting field of study for women.

2 Arnold L. R. Camerer (architecture), head of the Department of Architecture.

3 Dr Marc Liveris, head of the Department of Chemistry; later became dean of the Division of Applied Science, 1971; and was to lead health sciences at WAIT.

4 Londoner Dr T. J. (John) Betts, head of the Department of Pharmacy, was one of the few inaugural heads from outside the Perth Technical College.

5 A. K. (Tony) Russell (art), head of the Department of Art.

6 Cecil Emil Carr (management), head of the Department of Administrative Studies.

to him in the Technical Education Division. The Perth Technical College certainly lacked the administrative and academic services associated with the operation of a major tertiary institution. Although student records had been reorganised in 1955, much still needed to be done. Libraries, for example, were virtually non-existent. It was 1965 before a college librarian was appointed, although library budgeting commenced in 1959. The State government had compounded difficulties when in 1964 it transferred control of clerical and laboratory staff from the Education Department to the Public Service Commission. Within the Perth Technical College, such staff were not even answerable to the college principal.²⁸

The process of separating WAIT from Technical Education Division operations began in early 1967, led by T. M. Mooney, then executive director for Technical Training Year 1966, who acted as secretary to the Interim Council. Peters succeeded him as secretary on 1 June 1967, and in December led his administrative staff (now forty-nine strong) across to their new premises at Bentley, which were already in need of extension.²⁹

Under Peters the administration was divided into three sections: accounting, services and studies. From the outset accounting procedures were mechanised and placed on a private enterprise basis.⁶ Control of capital funds, previously under the Public Works Department, passed to WAIT in October 1967. Stan Perry had joined WAIT in July as its accountant. R. J. (Bob) Gardiner, from the Perth Technical College, joined as administrative officer (academic) in 1968.

The services section, led by Howard ('Topper') Girvan-Brown, absorbed a huge volume of work involving personnel, records, correspondence and reprographics, area and departmental liaison and services, and buildings and grounds. Managing the recruitment of staff alone presented a daunting task: in 1967 encompassing 157 academics, sixty-nine administration staff, two technical staff and eight others, and the processing of 4,000 applications. The following year the section needed to manage all the relevant immigration, travel and accommodation problems of successful applicants.³⁰

An examinations section under J. D. Burn was also established in 1967, and enrolments and examination results were computerised by the end of that year. The examinations section also controlled all publications and prepared to take over the administration of external (correspondence) studies from the then Technical Extension Service.³¹

During 1968, administrative services were further expanded, mainly in the applied science and engineering departments. Significant new positions included that of L. M. (Peter) Croy, to head a research and planning section concerned with preparing submissions to the Commonwealth, enrolment statistics and projections, space utilisation studies and statistical analyses.³² At the same time, computerised systems for cost controls and staff deployment placed WAIT in the forefront of institutional administrations in Australia.

Others to join at about this time were Peter Yacopetti and Paul Main. Yacopetti, from the Railways Department, was appointed as clerk in 1967, but

quickly progressed to administrative assistant (services), while Main started in 1968 as personnel officer.³³ Another section created was that of public relations, under A. F. (Bert) Wells.

So strong was WAIT's administrative competence that academics sometimes resented its influence, but in the early growth stages this strength gave the institute an unparalleled credibility among the relevant funding agencies. As a result, the institute was able to keep capital development on schedule and within budget and to use resources efficiently. Williams' reputation as a financial genius with the State government and Commonwealth government was built upon a foundation of able administrators and informed planning. One illustration of this quality was the work of Peters, acknowledged as something of a 'quirky' genius, who co-operated with Coombe to establish an international reputation in tertiary educational administration. He was sought after by UNESCO in Paris for systems built around WAIT's operations.

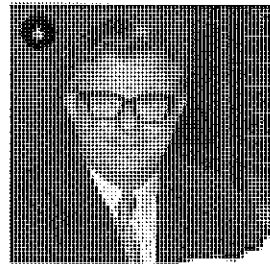
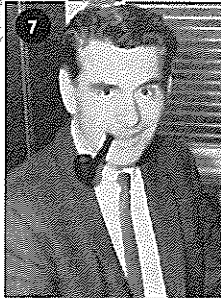
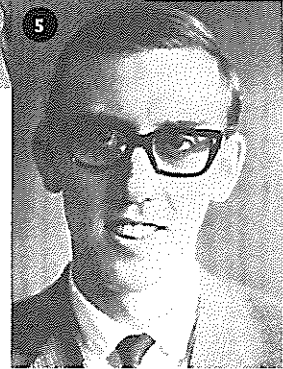
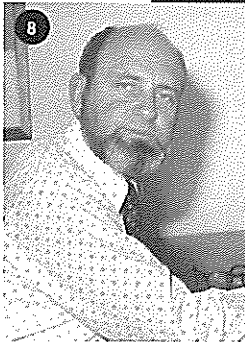
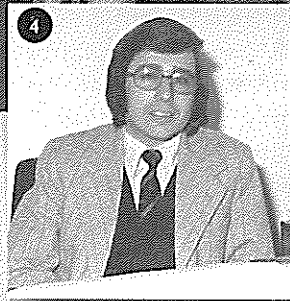
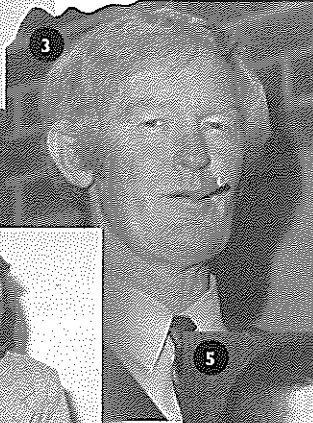
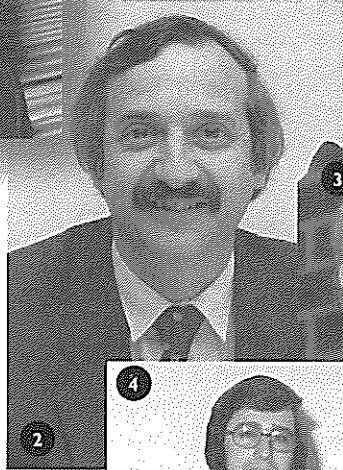
By 1969, and under a fully constituted council, WAIT was established as a major higher education institution in Western Australia. The change-over from State Education Department control was complete, and the institute's own administration well entrenched. As the first staff were settled and courses became established, many of the originally planned buildings opened, with much construction scheduled for completion over the next six years. WAIT was poised for an exciting growth spurt that would climax in the 1973/75 triennium. During 1970 the institute would take stock of its development in a consolidating phase before striking out in new directions in the decade ahead.

Finances

For its first six years WAIT operated under matching grant arrangements between the Commonwealth government and State government, with the State share comprising a government grant plus student fees, gifts and endowments. Commonwealth funding was distributed on the basis of 'dollar for dollar' for capital expenditure, and \$1.85 (State) to \$1.00 (Commonwealth) for recurrent spending.

Broadly speaking, WAIT was generously treated by both the State government and Commonwealth government in the first triennium. Both agreed to supplement unanticipated recurrent costs of \$957,000 for expenditures formerly carried by government departments, in part owing to the advocacy of Interim Council Member and Deputy Under-Treasurer McCarrey.³⁴ In any event, WAIT approached the first few triennia armed with well-developed plans ready for almost immediate implementation. Indeed, the Wark committee saw WAIT as something of a model for other States to emulate.

During the first triennium (1967/69) the first two stages of institute capital development were virtually completed.³⁵ Minister for Education Lewis opened the second stage buildings on 11 October 1968, comprising the administration, a main hall and lecture theatre, a cafeteria, a bookshop and student facilities.



ADMINISTRATIVE STAFF APPOINTMENTS IN THE EARLY YEARS OF WAIT
1 & 2 Peter Yacopetti: in 1967, as a youthful clerk; in 1985, as associate director (resources) heading WAIT's administration.
3 A. F. (Bert) Wells, public relations officer.
4 R. J. (Bob) Watson, organisation and methods assistant.
5 Paul Main, personnel officer.
6 Stan Perry, accountant.
7 L. M. (Peter) Croy, research and planning officer.
8 Malcolm Cunningham, assistant secretary (academic); appointed financial secretary, 1971.

Earlier, extensions to the chemistry and pharmacy buildings had been completed, and contracts signed for the architecture building.

The second triennium submission (1970/72) benefited from a more professional administration and included buildings to house the library, commerce, general studies, architecture and home economics, maintenance workshops, stage 1 of the engineering workshops and of a student centre, and such other facilities as a boat-shed, a tennis pavilion and squash courts. Equipment bids for new and existing buildings totalled \$1,212,050 and \$898,000 respectively.

Commonwealth and State support fell short of the amounts requested, necessitating tight controls over institute finances and substantial improvements in planning, administrative and control procedures. At the request of the State government, student fees were also increased. Student fees were calculated as part of the State government grants for which the Commonwealth contributed funds. Under the Education Department, fees had been very small indeed, but from 1967 they were brought more closely in line with those at UWA. The Interim Council offset this to some degree through a bursary scheme.³⁶

Academic and non-academic salary increases during 1970-1 saw government supplementation fall well below actual costs. McCarrey reported bluntly that as the State was unable to advance the full amount of its share, the balance would have to come from fees. Staff salary increases during 1970-1 brought on something of a crisis, with the only options being to introduce enrolment quotas, which were politically sensitive, or again to raise student fees. When the State government advised that rises of up to sixty per cent would be needed, the WAIT Council and students responded with protests, co-operating closely with UWA which was similarly affected. Similar actions across the nation led to heated student protest, and in Western Australia to an inquiry into student fees. The WAIT Council, faced with realities, nevertheless complied, although it also increased levels of student assistance while refusing to restrict enrolments.³⁷

Planning for Growth

During its first two triennia WAIT laid the foundation for a period of astounding growth in the third triennium 1973/75. Building projects planned from 1963 climaxed during this time, enabling the old Perth Technical College site to be completely cleared. All of this was achieved against a background of sweeping changes in Australian higher education, emerging institutional complexities in Western Australia and an initially buoyant economy. The State's economic and demographic conditions were about to change radically, but not before WAIT had virtually achieved its targeted growth. Within WAIT, structural reorganisation was influenced by the external environment and by the need to adapt to enrolment growth, administrative complexity and long-term planning.

WAIT's third triennium was dominated by the higher education policies introduced by the Whitlam Labor Government, elected in December 1972. Even during 1971 the conservative parties in Canberra had granted statutory status to the CACAE (Wark)—later the Commission on Advanced Education—and started the process of adding teachers' colleges to the advanced education sector. Labor policies implemented in 1973 transferred financial responsibility for higher education from the States to the Commonwealth, while abolishing student tuition fees and completing the absorption of teachers' colleges. The latter development removed the special status enjoyed by the major institutes of technology. Their unique financial needs would be obscured in Commonwealth priorities thereafter.

The State government after 1973 withdrew from financial involvement in higher education, although the WATEC retained a co-ordinating role. Williams openly opposed the loss of State financial participation which, as he predicted, centralised the locus of decision-making and power while extending bureaucratic tentacles.³⁸ Recently replaced on the Wark committee, Williams now served as an ex-officio member of the WATEC and as a member of the Australian Council on Awards in Advanced Education. As such he remained an influential figure among the heads of major Australian colleges.

At about the same time, Western Australia's second university, Murdoch University, was established. Robertson had fought against this development, having envisaged WAIT as satisfying demands for tertiary education beyond UWA. But the State government, at the suggestion of UWA and a planning committee established in 1970, agreed to the creation of an entirely new and autonomous institution. Both Labor and conservative parties enthusiastically supported the decision when passing the *Murdoch University Act 1973*.³⁹ WAIT hardly rated a mention in the relevant parliamentary debates, although at Bentley planners were keenly aware that a new university would erode the level of available resources. In the political arena, the opening of a second university was a matter of State prestige, not economics.⁴⁰

The problem of differentiating the functions of universities and CAEs had prompted the Australian Universities Commission and the CACAE (Wark) to produce a joint statement marking out sectoral boundaries. (Williams found himself in some hot water for publishing this statement in the *WAIT Gazette* before it was officially released.)⁴¹ However, the Murdoch University development heightened WAIT concerns, since the new university's objectives also emphasised a community and applied orientation. Williams drew attention to these similarities as an international trend affecting university education.⁴²

Advanced education in the humanities and the social sciences was given national consideration in the second Wark Report. Conscious of rising unemployment among humanities graduates, the committee emphasised the importance of identifying occupational opportunities. WAIT responded in 1971 by extending the range of post-graduate diploma courses into such fields as education, social work, librarianship, computing, data processing, psychology, administration, secretarial practice and accounting.⁴³

After two decades of almost uninterrupted growth in tertiary education, however, the Australian economy was losing its momentum. Unemployment and inflation were mounting even before the oil crisis of 1974 and the subsequent world recession. Only massive public spending by the Whitlam Government had prevented a more cautious approach to the financing of higher education.

WAIT's submission for the third triennium was based on the deliberations of a 'task force' charged with identifying needs within a long-range plan to the year 1981.⁴⁴ At the time Williams, backed by Peters, had become concerned about rising public demands for accountability in higher education. This led to a seminar on productivity among senior WAIT staff which, in turn, preceded exhaustive reviews of every facet of WAIT's roles, goals, organisation, administration and academic organisation.⁴⁵ The submission therefore carried the weight of careful analyses of staffing needs, demographic trends, participation rates and enrolment trends that were matched against national and State goals for economic and social development.

Underpinning the triennial submission was a projection of 15,000 student enrolments at WAIT by 1981, fuelled by a continuing high social demand for tertiary education. A growing need for recurrent and continuing education was identified, along with increasing interdisciplinary trends within occupations. For the immediate future, priorities included the development of two-year associate diploma courses, and one-year and two-year graduate diploma courses; the addition of teacher education programmes at WAIT; and expansion of external studies to serve the rural population. Against this picture of continuing growth, the submission emphasised the need for efficiency and economy—for example, through staff development and organisational reforms—to match projected growth of institute resources. Of particular significance was the anticipated need to plan new institutional development in the northern and southern suburbs of Perth to meet the patterns of population distribution projected for the coming decade.

Important objectives for the 1973/75 period included: rectifying existing deficiencies; developing the health sciences; consolidating areas already developed; establishing teacher education; refining central management and administrative services; and diversifying courses to satisfy varieties of needs. Capital projects included: the transfer of engineering to Bentley; extensions to commerce and social sciences; an earth sciences building; a health sciences building; upgrading the workshops; the first stage of a teacher education building; completion of the therapies building at Shenton Park; staff housing at Muresk; replacement of outmoded accommodation at the School of Mines; and a multitude of other improvements to services.

The capital outlay involved was estimated at \$29,797,000 which—added to recurrent expenditures of \$50,275,000—brought the grand total to more than \$80 million. Since this represented a quantum leap from amounts in earlier submissions, it was not surprising that the CACAE chairperson, Sir Ian Wark, viewed the amounts with some disbelief. He visited Perth in April 1971 with T. B. Swanson, who was to succeed him as chairperson, to consult with

Williams, Professor Colsell Sanders in the WATEC, State Treasury officials and newly elected Labor Premier of Western Australia John Tonkin.

Wark argued with Under-Treasurer Townsing that WAIT was asking for more than it could spend in the time available.

I indicated that I thought the Institute had its mouth opened pretty wide and that some redirections would be desirable, and instanced the very extravagant claims of the Institute regarding its library [\$1 million for acquisitions]. I said I felt that such a fast rate of expansion as was proposed was quite impracticable. However, despite some minor criticisms, I felt that very substantial increases were desirable. The extent of these depended upon the urgency of the Institute consolidating all of its activities in the [Bentley] site.⁴⁶

In the circumstances, Wark was surprised at the responses he received. Townsing 'indicated that he felt that a rapid transition of this type [to the Bentley site] was very desirable'. Sanders said:

...that the Institute could spend the money...that rapid growth was desirable particularly in that the Institute could vacate its two central city sites; and that the State would be able to support at least a substantial part of the proposals...⁴⁷

Wark recorded a significant conversation with Williams concerning WAIT's apparently insatiable desire to absorb new programmes and branch institutions:

...[I] urged Williams, without much success, to strive to assist in development of additional campuses with the idea that they should be granted autonomy just as soon as practicable. There is no doubt that he is an extremely capable administrator, and yet I tried to suggest that he would be overworking himself. At that stage he disclosed that he proposed to retire at the age of 60 years because he feels at that time he would have made whatever contribution he could give to tertiary education in Western Australia.⁴⁸

Subsequent discussions between the State government and Commonwealth government produced a limit of \$15 million on capital and \$40 million on recurrent expenditures for the period. To accommodate the reduced amounts, WAIT pared its major works for the triennium to four major projects: completion of the engineering complex; construction of a new biology building; construction of the education building; and construction of new sporting and recreational facilities, in addition to extensions and modifications to existing buildings.⁴⁹

The Commonwealth also agreed to provide matching funds to establish student accommodation. Out of this agreement, Guild House and Rotary International House were built. Quickly organised projects under the Whitlam Government's Regional Employment Development Scheme (REDS) late in the triennium, enabled the institute to expedite work on ovals and on landscaping the Bentley site.

Restructuring of WAIT

The sensational murder of the deputy director, Dr Ronald (Alan) Coombe, on 1 December 1970, precipitated a reorganisation of senior management positions at WAIT. Coombe was murdered in Hong Kong in a particularly gruesome knifing

incident that produced an avalanche of unwanted publicity and a series of sordid court cases associated both with the murder and with the distribution of superannuation money to his wife and dependants.⁵⁰ The shock was compounded by the fact that Coombe was in Hong Kong when he was supposed to be in London on WAIT business. The publicity soon passed, but Coombe's death raised the question of whether to replace him or to reorganise the upper echelons of WAIT management.

Personal support for the director was an immediate issue, and the council sanctioned the secondment of academic staff variously to act as personal assistant to Williams, including Dr Warren Walker (1971), Stan T. Waddell (1972) and Colin Sears.⁵¹ Replacing Coombe was more contentious, since the assistant directors had resented the interposition of a deputy between themselves and the director, and lines of communication had become confused. They sought a flatter distribution of power and authority at WAIT, with decentralised administration services and shortened lines of communication between the director and the academic departments.⁵²

One outcome was the appointment of an assistant director (educational services), The Reverend Nicol Milne. Originally an academic in Semitic studies at Melbourne, Milne was given administrative oversight of the Robertson Library, the Educational Development Unit, the Educational Media Centre, external studies, the Counselling Service and the School of Mines. This last responsibility caused something of a furore in Kalgoorlie, where it was regarded as a reflection on the School of Mine's status in WAIT priorities.

In August 1972 Williams asked the WAIT Council for more assistance. Academic leadership was especially needed to prepare courses for accreditation as degree programmes, while staff policy was an area of growing contention.⁵³ Student policy too, took on new significance as the Student Guild attracted radical student politicians. The council rejected the idea of re-establishing the post of deputy director which senior academic staff had opposed. It determined instead to appoint an assistant director (academic) who would join the three deans of divisions, the assistant directors of administration and finance and of educational services respectively, and the director, to form an augmented management team.⁵⁴ Dr W. A. (Bill) Pullman, the person selected for the new position of assistant director (academic), joined WAIT in August 1973. He came from a background that included headship of the Department of Mechanical Engineering at the Rugby College of Technology and extensive experience with the Institution of Mechanical Engineers.⁵⁵

The appointment of Milne and Pullman, as well as foreshadowing changes to academic organisation at WAIT, led to reform of the key institute policy committees in 1973. Having outlived their former functions, the management and policy boards were reconstituted as the Institute Planning and Resources Board, with an expanded membership and a revised role.⁵⁶

The Academic Board, recognised as the major weakness of the Institute, incurred changes to its membership and functions which were designed to improve its effectiveness. The new membership included: the director and

assistant directors; and from each division the dean, one elected head of department and one elected staff member; in addition, the principal librarian; the principal of each branch; the president of the ASA; and two student representatives. The Academic Board's functions, although essentially the same as before, were much enhanced by virtue of its powers to review all courses submitted for accreditation under the new national scheme.

The WAIT Council initiated a further review of institute advisory committees, which had been the subject of trenchant criticisms from a few of the external representatives contacted in the council's review of its own role and membership.⁵⁷

During 1971 every department at WAIT underwent a thorough productivity review. Central issues arising from the surveys included: the incidence of failure and drop-out, and ways to minimise this within constant budgets; the improvement of efficiency and effectiveness in teaching through new techniques, larger classes, concentration of resources and employment of sub-lecturer level staff; and the creation of more effective linkages to industry and other employing groups.

In March 1972 Peters prepared a consolidated summary of educational issues raised in the departmental reviews. Student wastage and failure clearly needed attention, since in some departments 'a throughput rate of 50 per cent or worse [was] common'.⁵⁸ Increasing enrolment of full-time students appeared to offer future relief, but this ran counter to the mission of WAIT to provide specifically for part-time and external students. Peters also identified limited support for the following: a common first semester; quotas to improve intake quality; employment surveys among WAIT graduates; and promotion of interdisciplinary communication. Significantly Peters' survey identified a preference for decentralisation to counterbalance the perceived dominance of WAIT's administration.

The WAIT Management Board began discussion about replacing the three divisions at WAIT in June 1970, as part of a scheme to flatten the pyramid of academic organisation.⁵⁹ Debate centred around the idea of establishing a number of coherent schools that would recognise the emergence of large, new study fields (for example, in the social sciences and the health sciences); divide up the huge Division of Commerce and Social Sciences; alleviate internal difficulties in the Division of Architecture, Art and Engineering; better integrate the School of Mines into WAIT's structure; and accommodate anticipated developments in teacher education. General planning sought at the same time to retain the interdisciplinary focus of WAIT.

In March 1973 the council approved the creation of schools of business and administration, social sciences, applied sciences and health sciences—all headed by a dean.⁶⁰ During April 1974, council deliberations concluded in favour of separate schools of engineering and of the arts, the latter encompassing the departments of art and design, of English and drama, of architecture and of music.⁶¹ Late in 1973, in the wake of extremely contentious negotiations, the council resolved to form a School of Mining and Mineral

Technology that combined work of the School of Mines with that in geology and metallurgy at Bentley.⁶²

Accompanying the new structure, the council from 1974 introduced fringe benefits to compensate senior staff from dean upwards for their heavy administrative loads and to ensure the continuity of academic leadership. Benefits included entertainment allowances, motor vehicles, subsidised telephone accounts, and three months of special leave every three years for overseas study relevant to the institute. At the same time, the council set aside larger sums to fund study leave for all academic staff.⁶³

Peters started the process of decentralising administration at WAIT in 1969, when his broad plans were considered by the council. These envisaged divisions (later schools) gaining greater operating autonomy under the deans, functioning within policy laid down by the council and the director.

Reorganisation began in earnest in July 1971 with Peters' appointment to the position of assistant director (administration and finance).⁶⁴ Two posts of secretary, (financial) and (administrative), were filled by Malcolm Cunningham and P. E. Hobbs respectively. Consequent changes down the administrative line followed. Advancements in computerising of administrative operations were especially notable in the accounts branch, which enabled a range of substantial studies to be undertaken of institute operations. A conference on statistics in tertiary institutions, hosted by the WATEC in August 1972, showed how advanced WAIT's systems were by that stage. Among a host of other changes achieved during this period, two warrant special mention: one was the appointment of Peter Yacopetti in August 1973 to the post of executive assistant to Peters, with institute-wide responsibilities;⁶⁵ the other was the appointment of R. J. (Bob) Gardiner as administrative officer in an Academic Secretariat established to service WAIT's main academic boards and committees.

Industrial relations inevitably changed as administrative operations became more complex and the institute grew in size. During 1974–5, ministerial approval of non-academic salaries was delegated to the WATEC and the WAIT Act amended accordingly. Equal pay for women also was introduced at this stage. During 1972 WAIT's non-academic staff formed a Salaried Officers' Association, which the WAIT Council quickly recognised as the body representing its own staff.^{66*}

Planning the 1976/78 Triennium

WAIT's submission for the 1976/78 triennium focused on rounding out and consolidating the powerful base established since 1967.⁶⁷ The capital developments of the previous triennium were all completed on time and within budget, a remarkable result. In this an important factor had been Commonwealth supplementation to cover inflation, which also benefited salaried staff. The submission focused particularly on establishing two-year associate diploma courses and non-credit extension programmes as part of a philosophy of

* See Appendix 1 for outline of WAIT's general organisation in 1975.

'recurrent education'. Peters had been especially active in this area since his return from Europe, where it was attracting widespread attention as the next phase of education policy. WAIT indeed sponsored a significant experiment in 'non-traditional' tertiary education under the leadership of Dr Michael Walker, which was co-funded by the *Sunday Independent* and the Farmers Union of Western Australia.⁶⁸ A visit by Ontario's Dr Douglas Wright (who wrote *The Learning Society*) in 1974, was typical of the interest in recurrent and non-traditional education. There was also optimism about introducing common cores, broadening the base of professional training, encouraging interdisciplinary content and complementing WAIT's technology base through a broadened range of activities in the humanities and social sciences.

Computing needs bulked large in the 1976/78 triennium, and a computing committee headed by Dr John de Laeter undertook detailed surveys to identify needs and propose the purchase of appropriate equipment. Requests for capital items totalling \$1,500,000 and recurrent funds of \$512,000 over each of the three triennial years represented a shift to the extensive use of terminals around the campus, the introduction of minicomputers, and independence from the Western Australian Regional Computing Centre at UWA.

The capital works submission started from assumptions about a foreseeable growth limit at Bentley; the need for separate and special funding at the School of Mines and at Muresk; and completion of planned stages of buildings already in operation. Future expansion beyond Bentley had been the focus of a study by Pullman and Peters into the tertiary education needs of the northern suburbs; and funds for planning and establishing a new branch at Whitfords or, alternatively, for a new business and administration building at Bentley, were included in the submission. (The third alternative, which actually was implemented, was to add business and social science courses to the work of the Churchlands CAE.)

All told, the WAIT submissions totalled \$35,150,000 for capital projects and \$69,677,000 for recurrent expenditure. Capital projects supported were the health sciences building, stage 4 of engineering, the arts complex, the applied sciences-earth sciences complex, the staff club, stage 3 of the education building and other minor works. The Commonwealth Commission on Advanced Education also largely concurred with proposals for Muresk and particularly Kalgoorlie, recommending in total \$26,324,000 for capital projects and \$74,824,000 for recurrent expenditure.⁶⁹ In effect, the commission had approved most of what WAIT had asked for.

Nationally the Commission on Advanced Education supported improved student union facilities and services, the continued growth of part-time and external enrolments, and development in continuing education. It also reviewed the implications of absorbing the teachers' colleges, which had brought the total number of institutions under its wing from thirty-nine to seventy-nine. The advent of the Technical and Further Education (TAFE) Commission, however, signalled a potential shift in Commonwealth financial priorities away from higher education. More telling for WAIT, perhaps, the

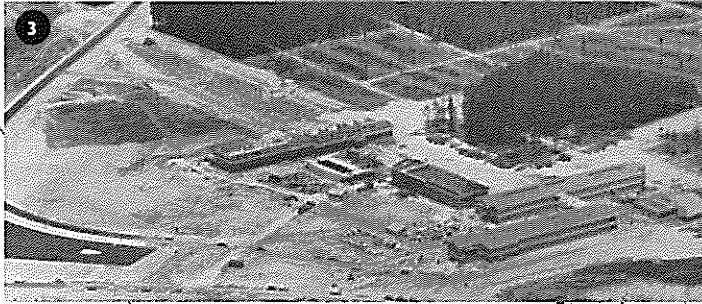
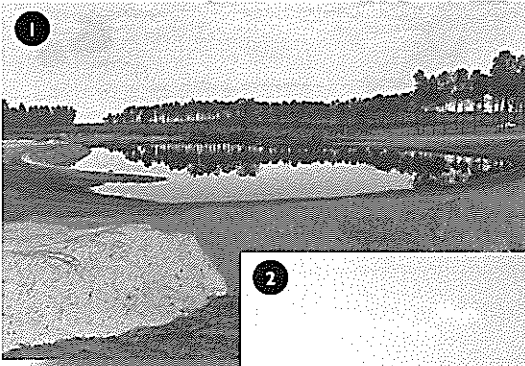
Commission on Advanced Education also queried both the expansion of post-graduate diploma and masters degree programmes in the CAEs, and the emergence of non-vocational programmes in the humanities and social sciences.

As it happened, the oil crisis, the post-1974 recession, substantial budget cuts for higher education in 1975 and, finally, the dismissal of the Whitlam Labor Government spelt the end of a near-decade of spectacular growth in Australian tertiary education. Under budget constraints, triennial funding was abandoned and all new developments suspended.

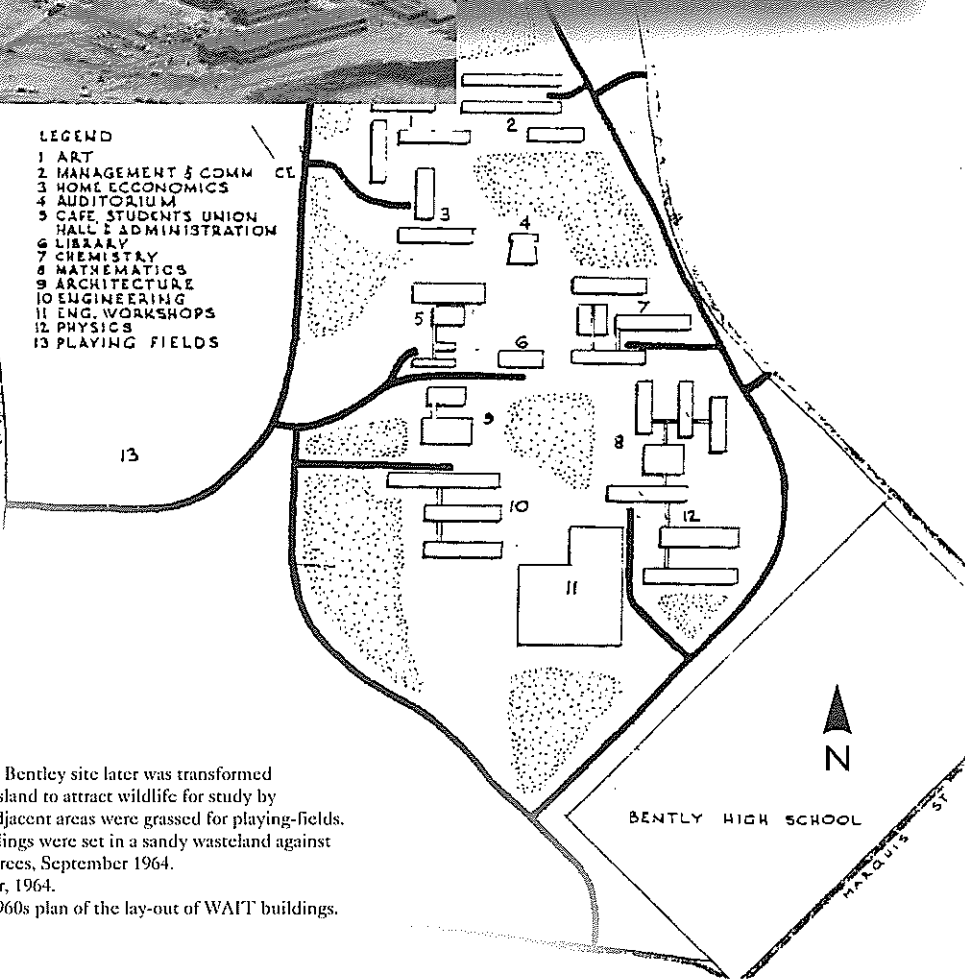
Retirement of Peters

The ending of this spectacular growth period at WAIT was marked by the premature retirement of Peters who, with Williams, had been one of its architects. In April 1974 Peters travelled to Paris as a Visiting Fellow with UNESCO, where he suffered a mild heart attack. After returning to WAIT, he was struck down by a serious stroke which eventually robbed him of the ability to speak and write, the two skills in which he had always shone. Peters eventually retired in October 1974, to be remembered by the WAIT Council in its naming of extensions to the administration building as the 'Howard Peters Wing'.⁷⁰ He never recovered from the stroke and died in 1987.

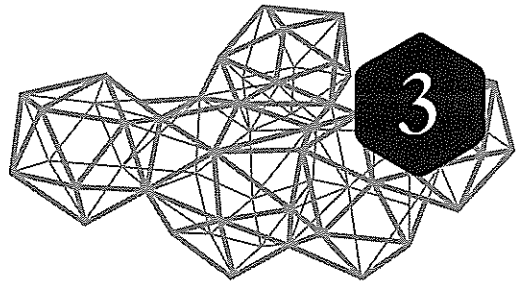
Peters' retirement closed a significant period in WAIT's history. His contributions were unique: as administrator, policy-maker and educational thinker. In Peters WAIT discovered a very different person from the typical higher education administrator, and Williams found an admirable colleague in shaping a remarkably close working relationship. Sharing Gargantuan appetites for work, both could often be seen walking the WAIT grounds at 7 a.m., deep in discussion about the day's coming issues. For one who lacked formal graduate qualifications, Peters embraced an extremely liberal view of higher education. (While in Paris during 1974, he had been preparing a monograph entitled 'Reason to be—a question for education', which dealt with the theme of lifelong learning in higher education.) Peters' pervasive influence over WAIT's early development engendered some resentment among a few academics who found disconcerting his grasp of educational theory, and his mastery of administrative and financial detail. Lacking higher academic honours himself, Peters keenly felt this resentment, although he had nearly finished a degree in management at the time of his stroke. His own career epitomised the potential of 'open tertiary education', which so attracted his attention in his final years with WAIT. Peters bequeathed to his much-loved Institute of Technology a sophisticated planning and administrative machine that was the envy of many other Australian institutions.



- LEGEND
- 1 ART
 - 2 MANAGEMENT & COMM CE
 - 3 HOME ECONOMICS
 - 4 AUDITORIUM
 - 5 CAFE, STUDENTS UNION, HALL & ADMINISTRATION
 - 6 LIBRARY
 - 7 CHEMISTRY
 - 8 MATHEMATICS
 - 9 ARCHITECTURE
 - 10 ENGINEERING
 - 11 ENG. WORKSHOPS
 - 12 PHYSICS
 - 13 PLAYING FIELDS



1 The swamp at the Bentley site later was transformed into a lake with an island to attract wildlife for study by biology students. Adjacent areas were grassed for playing-fields.
 2 WAIT's first buildings were set in a sandy wasteland against a backdrop of pine trees, September 1964.
 3 WAIT from the air, 1964.
Background: Early 1960s plan of the lay-out of WAIT buildings.



Buildings and Grounds

The Architecture of Technical Education

The point was made in Chapter 1 that by 1956, accommodation problems at the Perth Technical College had reached crisis point. In fact building accommodation deficiencies had been a perennial problem in technical education from the time the Perth Technical School had been opened in 1900, occupying premises originally belonging to the Perth High School. Enrolments had risen so quickly that the accommodation became hopelessly inadequate. Some relief had been experienced when, in 1910, the government found the money to build the first Perth Technical School building designed for the purpose. This was the last major construction, however, until a trades block was opened at the Perth Technical College in 1940, using funds from a Commonwealth grant for youth employment and a Youth and Motherhood appeal launched during the Depression years. During the war and post-war reconstruction years, when enrolments had soared under the Commonwealth training schemes of the period, various temporary huts had been added on the original St George's Terrace site. By 1956 these huts were being described as verminous, a disgraceful reflection on the priorities accorded technical education generally.

Part of this situation is explained by Robertson's long-term goal of concentrating public expenditure, first on primary and secondary education where the needs were uppermost, and then focusing on technical education as pressures eased at the lower level. This meant that technical schools were relatively neglected until the 1950s, when at last attention shifted to finding new accommodation for the Perth Technical College. Hence the urgency concerning sale of the St George's Terrace site, and redevelopment of the college at the James Street buildings occupied by the Perth Boys' School, and at the East Perth site occupied by the Girdlestone Girls' School. Decisions to

move the college, renamed the Institute of Technology, to Bentley in 1962, have already been described.

What needs emphasising at this point, however, is the opportunity that was presented to rectify substantially the appalling conditions under which the old Perth Technical College had traditionally functioned. This extended not only to basic buildings and equipment for teaching purposes but also to the aesthetic quality of construction, the provision of student amenities and ceremonial venues, and the creation of attractively landscaped grounds and playing-fields. Technical institutions lacked the graceful grounds and buildings associated with UWA, the major private secondary schools and even most of the newer State schools. This situation reflected the poor public image of technical education which translated into government neglect and student apathy.

Williams drew attention to all these handicaps when preparing submissions for financial assistance from the Commonwealth government at the time of the Murray and Martin reports. The Martin and Wark committees, for their part, strongly advocated the spending of public resources on modern buildings and other facilities to improve the public perception and status of higher technical education. In the event, the Western Australian Government took decisions in 1962 to establish the Institute of Technology as a new institution, planned from the outset with these more generous conceptions as a high priority. The decisions predated the advent of Commonwealth financial assistance to the non-university sector of tertiary education. It was inevitable, however, given the sums involved and the attendant publicity, that developments at Bentley would be subjected to critical scrutiny in the public arena and among teaching staff at the Perth Technical College.

Site Plans, Designs and Buildings

The decision in 1961 to locate the institute at Bentley substantially altered Education Department perceptions of its space needs. In July the area secured for WAIT was increased from 114 to 277 acres, foreshadowing its possible evolution into a full technological university. Vin Davies commenced the original sketches and more detailed design work for the first buildings which were scheduled to begin construction in 1963. Simultaneously the Town Planning Commission turned its attention to regional planning for the then virtually untouched pine plantation area.

Town Planning Commissioner J. E. Lloyd in 1964 started from the assumption that:

...the Institute of Technology will always constitute the dominant use of the [Collier] site, which will eventually become an important environment. It will draw students from all parts of the region and therefore must be accessible from all directions.

Road systems in the area would need to be redesigned to improve access from the north and west, involving extension of Kent Street through to Manning Road and reorganisation of other streets to mesh with the overall concept. The virtually untouched pine forest, in Lloyd's view, presented opportunities:

...to create *an environment* having compatible activities in which it will be comfortable, pleasant and aesthetically satisfying. We must set a land use pattern which is subject to unified and complete control over a long period of time.

The best use should be made, he emphasised, of a topography including trees, crests and slopes, '...parklands and natural swamps which could become lakes'.

In contemplating uses for the area earmarked for government and other institutions, Lloyd's advice was prescient:

As the Institute of Technology develops, a whole range of uses associated with science and technology could arise. Industries, for example, where students from the Institute could gain practical experience, could be a compatible use, e.g. the electronic industries associated with similar colleges in California.

National planning in the modern sense of the word is dependent on science and technological advances. At the present time the country is obliged to make decisions as to great systems of public works, elaborate public health services, education, also as to powers and relationships of corporations and the cost and utilisation of natural resources. All these problems have in the past been accentuated by technological development which has provided jobs for working people, has opened up vast material resources, has speeded travel and communication, and has led to nation-wide business organisations handling goods and services unknown to previous generations. Each new discovery with technology produces waves of influence often leading to new processes all of which require space to operate.

It would be wise policy, therefore, to pause and consider the future of the remaining 270 acres, and not to accede to requests from private agencies for large tracts of land, many of whom do not at the time of the request have a comprehensive idea of how much land they really need for buildings and landscaping.¹

In this general context, Lloyd warned about the need to ensure a high quality of housing and to fit commercial buildings and recreational areas into a coherent and balanced environment.

Reactions to Lloyd's paper were very mixed, and the interdepartmental committee concerned allocated land to a wide variety of bodies and agencies. They included (amongst many others) the State departments of agriculture and of forests, the Swan Cottage Homes Ltd, the City of South Perth (for recreation fields and a municipal depot), the Ngala Mothercraft Home and Training Centre, the Methodist Ladies' College and the Education Department.²

Davies' designs for the first stages of construction, constrained by limited State funds, were developed from a brief by Hayman and discussions with various Perth Technical College departmental heads. He opted for a 'spine' system for the buildings, featuring corridors flanked to the south by the larger laboratories and classrooms, and to the north by small preparation rooms, stores, staff studies and minor laboratories. For the northern aspect, affected by strong sunlight and summer heat, Davies designed small windows set in deep reveals. Teaching areas faced south, receiving broad expanses of less overpowering light. Hollow piers and walls and false ceilings were employed to house the various services required.³

Davies placed the major buildings on the high, eastern side of the site. This overlooked by some ten metres the lower land to the west, which included a natural swamp. To the north, areas not yet needed were left as pine forest. Perimeter road and parking services were situated away from the pedestrian movement between departments. The buildings, grouped according to function, were arranged '...fan-wise about the administration, cafeteria, student hall complex, which sat along a ridge and so dominated the whole site'. Davies envisaged a formal court as a focal point for these central structures: the chemistry and the physics and mathematics buildings, the future library and a planned auditorium. He adopted a 'finger' planning concept that would enable all buildings to be adapted as needed 'to any extent and at any time'.

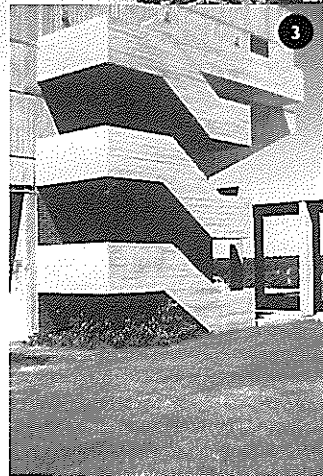
'A Brutally Frank Statement of Honest Architecture' were the terms employed in the *Construction Review* to describe the Davies buildings, which featured concrete and brick 'used...in simple form, honestly and boldly'. They were intended to achieve multiple objectives including permanence, low initial and maintenance costs, and improvement of appearance with age, while at the same time establishing an architectural theme. Davies used off-form concrete as the basic structural material, which was relatively inexpensive yet enabled him to fulfil Education Department requests for a design and materials reflecting '...the tough, technological character of the Institute'. Davies selected locally manufactured bricks as the other major building material. These were half the price of pressed facings and offered a more natural and texturally richer finish. Such simple materials also enabled variations without distorting the overall architectural unity of the campus. In Davies' words, the '...manner of the initial buildings would impose only a similar character, not appearance, on subsequent building'.⁴

For the construction phase, Davies employed an elaborate formwork of '...green sawn Jarrah planks mixed and assembled at random either horizontally or vertically'. Unfortunately construction firms in Perth had little experience with off-form work. Moreover, the high mineral content of local water produced unsightly brown-yellow stains in concrete, which needed to be removed by wire brushing.

Perth's *cognoscenti* reacted strongly to the new institute buildings. 'A lot of people are not going to like the look of the million pound first stage of Western Australia's new Institute of Technology', warned *The West Australian's* Jack Edmonds. 'The tough, uncompromising austerity of off-form concrete dominates the buildings', he wrote, adding:

This is an architectural revolt against the transparent look and ubiquitous modern buildings of glass and factory-made shine. It follows the latest trends but leaves me with a niggling doubt. It seems to leave the Institute of Technology something of a poor relation compared with the University—our other centre of tertiary education.⁵

Comparisons with UWA also coloured more outspoken complaints from the State School Teachers' Union, reflecting staff opinion at the Perth Technical College. Union representatives were dismayed at the appearance of the chemistry building, describing it as lacking '...the distinction desirable in an

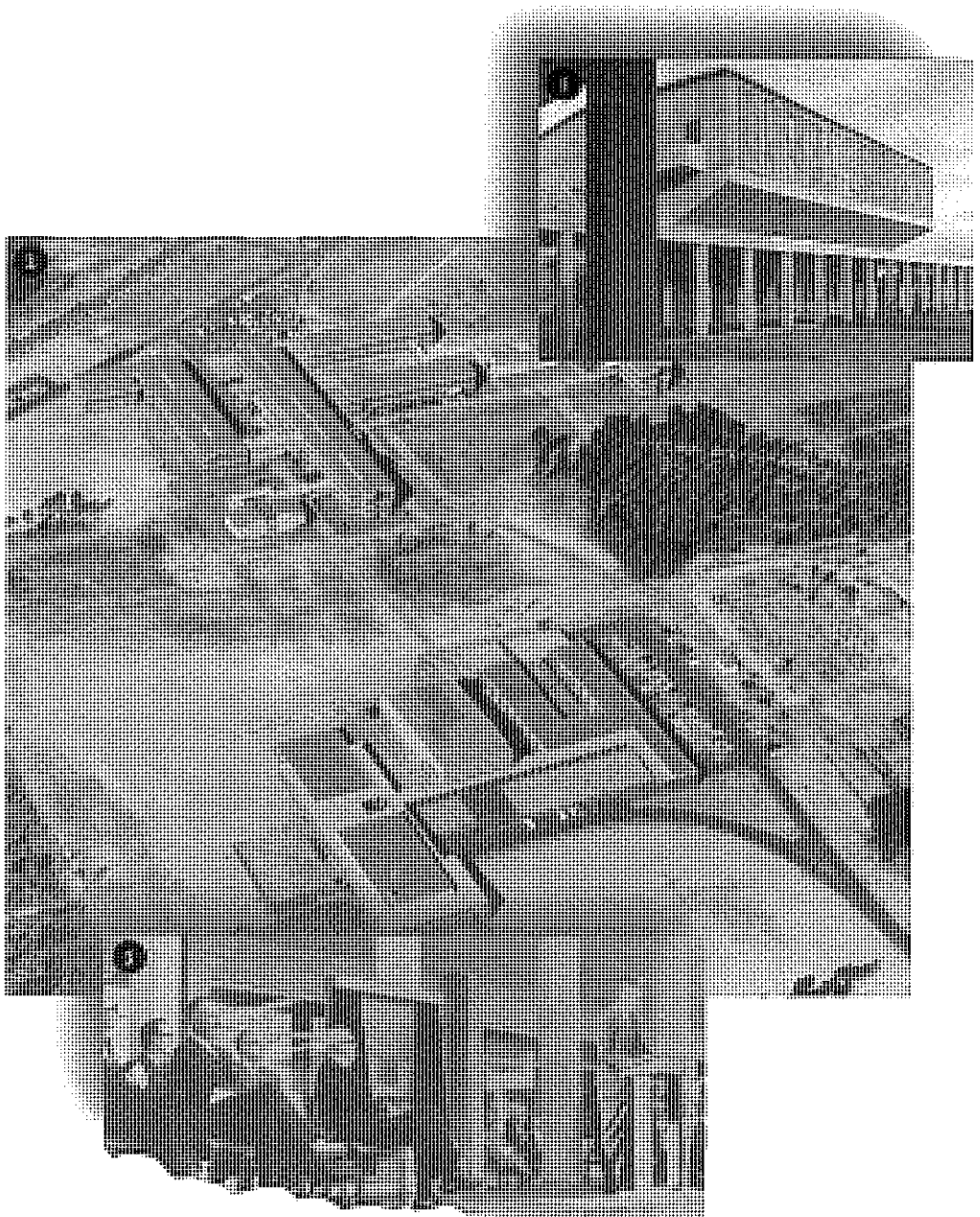


BRICKS AND OFF-FORM CONCRETE WERE THE MAIN BUILDING MATERIALS EMPLOYED IN VIN DAVIES' DESIGNS FOR WAIT

1 The steps to the main entrance of the chemistry building under construction in 1963, while the roof goes on the mathematics building on the right.

2 The curved off-form concrete wall of the physics lecture theatres taking shape, 1963. They later were named the Davis Lecture Theatres after Ray Davis, former Perth Technical College principal.

3 Textured off-form concrete stairways such as these outside Hayman Hall were a feature of Davies' architectural unity.



1 Built on the highest point of the Bentley site, Hayman Hall dominated the western approach.

2 Autonomous for a year, WAIT in 1968 showing the foundations of the architecture building (*centre right*) being laid.

3 State Minister for Education Edgar Lewis (*standing*) opened the administration buildings in October 1968, which comprised Hayman Hall, Phillips Lecture Theatre, administration offices, cafeteria, bookshop and student facilities. Commonwealth Minister for Air Gordon Freeth is in the foreground, second from left; and Interim Council Chairperson Dr Thomas Logan ('Blue') Robertson is seen in profile against the unveiled plaque.

institute of higher learning...which...should consist of buildings impressive and dignified'. They attacked the roof ('unnecessarily ugly'), the cement work ('a rough and unpleasant finish'), the bricks ('drab and uninteresting'), the northern wall ('the deep-set windows...give the...appearance of a prison or fortress'), and the corridors and stairwells ('a mean compromise to utility and cost').

The union's complaints concluded that:

...an Institute of such great importance to the educational development of the State should be housed in buildings whose appearance would reflect the importance of a centre of higher learning. While the opportunity to construct such buildings may be partly lost, it is requested that future buildings will be aesthetically pleasant and in harmony with the purposes for which they are established.⁶

Minister for Education Lewis echoed these views after visiting the buildings with Robertson on 10 March 1965. He afterwards wrote to Robertson: 'I delayed expressing my impressions of the [chemistry] building in the hope that, in retrospect, I might consider it more favourably'. Lewis even proposed rendering or otherwise covering the exposed concrete work.⁷

Public Works Department architects believed these judgments to be ill-informed and premature. They drew parallels to criticism of their work on the Empire Games Village at Floreat Park which, once the gardens and landscaping had been completed, drew accolades; and some did concede that with landscaping, gardens, trees and pedestrian throughways completed, the campus might appear less barren. Visitors had seen the buildings at their worst, without even the advantage of a scale model illustrating the total concept.⁸

It should also be emphasised that these first buildings were erected without the benefit of Commonwealth financial support, funded from the State Treasury at a time of great budgetary strain. The graceful original architecture at UWA, by contrast, had been financed from John Winthrop Hackett's huge bequest. Later construction never matched the aesthetic excellence of the university's early buildings. The WAIT buildings certainly created a stir. They were striking, imaginative and uncompromising, and conformed to a coherent long-term plan of campus development.

As mentioned in Chapter 1, the first two stages of building construction at WAIT were completed during the interim grant and first triennial periods 1965/66 and 1967/69 respectively. Premier Brand opened the first stage in August 1966 during the Technical Training Year. Extensions to chemistry and pharmacy were completed soon afterwards and contracts let for an architecture building. The second stage buildings, comprising the administration, a main hall and lecture theatre, a cafeteria, a bookshop and student facilities, were opened on 11 October 1968 by Minister for Education Lewis. Guests included the chairperson and members of the Wark committee, for whom WAIT's planning and development stood as a model for the rest of Australia to emulate.⁹ In most other States, advanced education building at the time was *ad hoc* and situated on cramped sites that were dominated by old technical college buildings.

Buildings at WAIT were named after the key personalities involved in the founding of the new institution and its academic departments, while the roads around the campus were named after prominent Western Australians. The first lecture theatres were named after William George Hayman (Hayman Hall), Leslie William Phillips (Phillips Lecture Theatre), Dr Eric M. Watson (chemistry) and Ray Davis (mathematics and physics). A new section added to the administration building was named on Peters' retirement, the Howard Peters Wing, while the library was named after Robertson following his death (in 1969). Roads around the campus were named after Premier Brand; Minister for Education Lewis; the director of the Public Works Department, R. Dumas; industrialist H. L. Brisbane; and Hayman.¹⁰

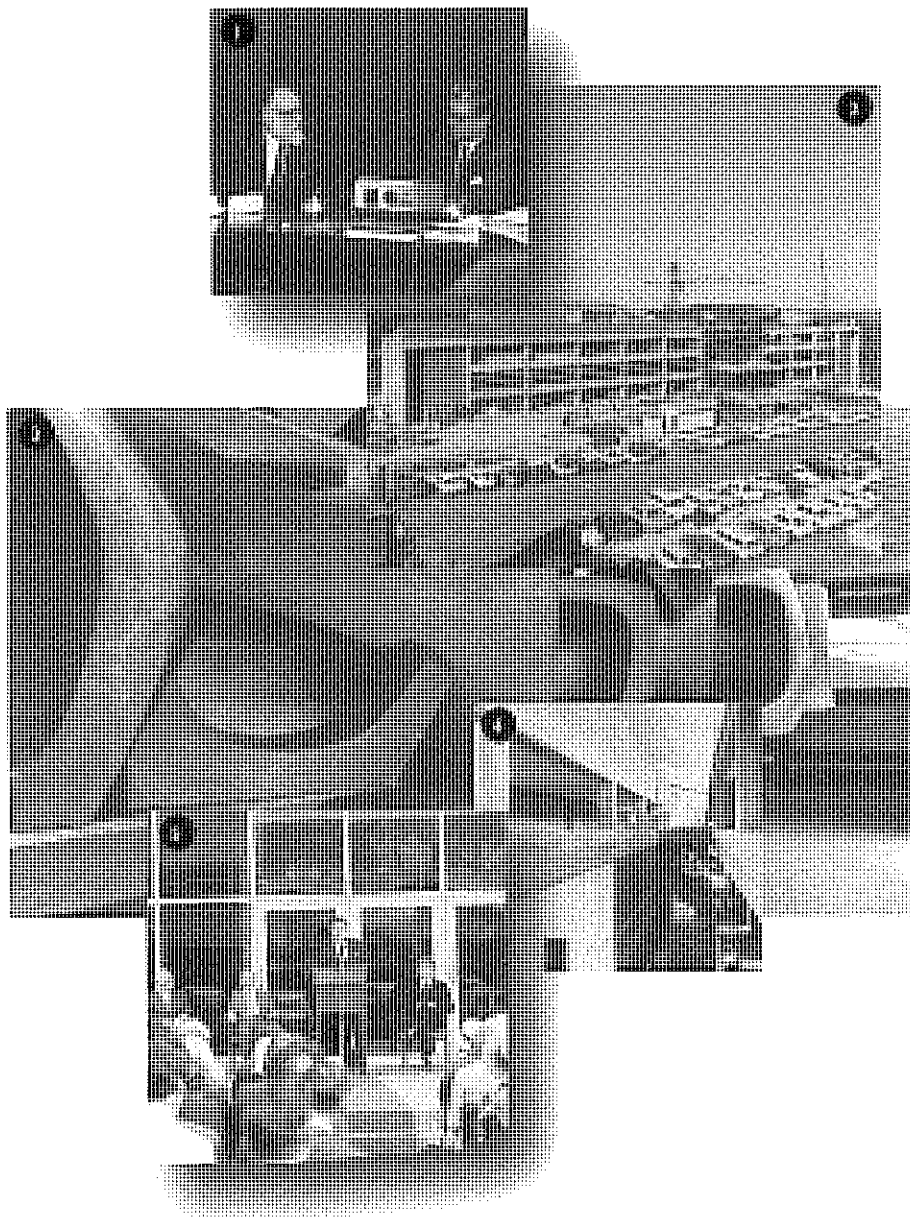
The architecture building, estimated to cost \$1,430,000, was considered extravagant by the Wark committee building specialist. Wark nevertheless supported the project, having in mind the hitherto 'poor relation' status of much building in the CAE sector. Wark reflected:

Remembering the rather delightful buildings of the University of Western Australia...I wondered whether every college should not be permitted to have at least one prestige building. I would have preferred this to be a great hall or something of the sort, but if WAIT wanted it to be the School of Architecture (and there were certainly good reasons why one should have an attractive School of Architecture) then we might agree.¹¹

In fact the architecture building, commissioned in 1970, cost a great deal more than originally estimated. The contractors went bankrupt and the project became the subject of prolonged litigation. The structure itself, although architecturally challenging, attracted some criticism from WAIT staff who found it lacked flexibility and practicality.

The WAIT library, designed by Vin Davies as the central focus of the Bentley campus, had been planned along with the first set of buildings.¹² Within the Technical Education Division Tom Oakley, as general assistant within the Department of Architecture, contributed much to the original specifications along with L. McGrath, who headed the Library Branch of the State Education Department. Oakley, appointed in 1955, had been responsible for building up the Perth Technical College collection which in 1961 had been housed in an old building at St George's Terrace. These premises had originally been occupied by the Perth High School, which opened in 1853. Oakley, McGrath and Davies had undertaken much of the concept planning before the appointment of Geoffrey Allen as principal librarian at WAIT. Allen, previously technical services librarian at UWA, planned most of the internal layout and furnishings of the new library building. Des Simpson, senior lecturer in design, helped with the design of internal furnishings.

Commonwealth acceptance of the WAIT library project was another example of the advanced state of planning for the Bentley campus. The Wark committee, much perturbed by the poor condition of technical college libraries throughout Australia, not only fully supported the State's submission on the library, it also persuaded the Commonwealth to make special emergency grants



WAIT'S THEN SHOWPIECE, THE ARCHITECTURE BUILDING, WAS OPENED IN MARCH 1971

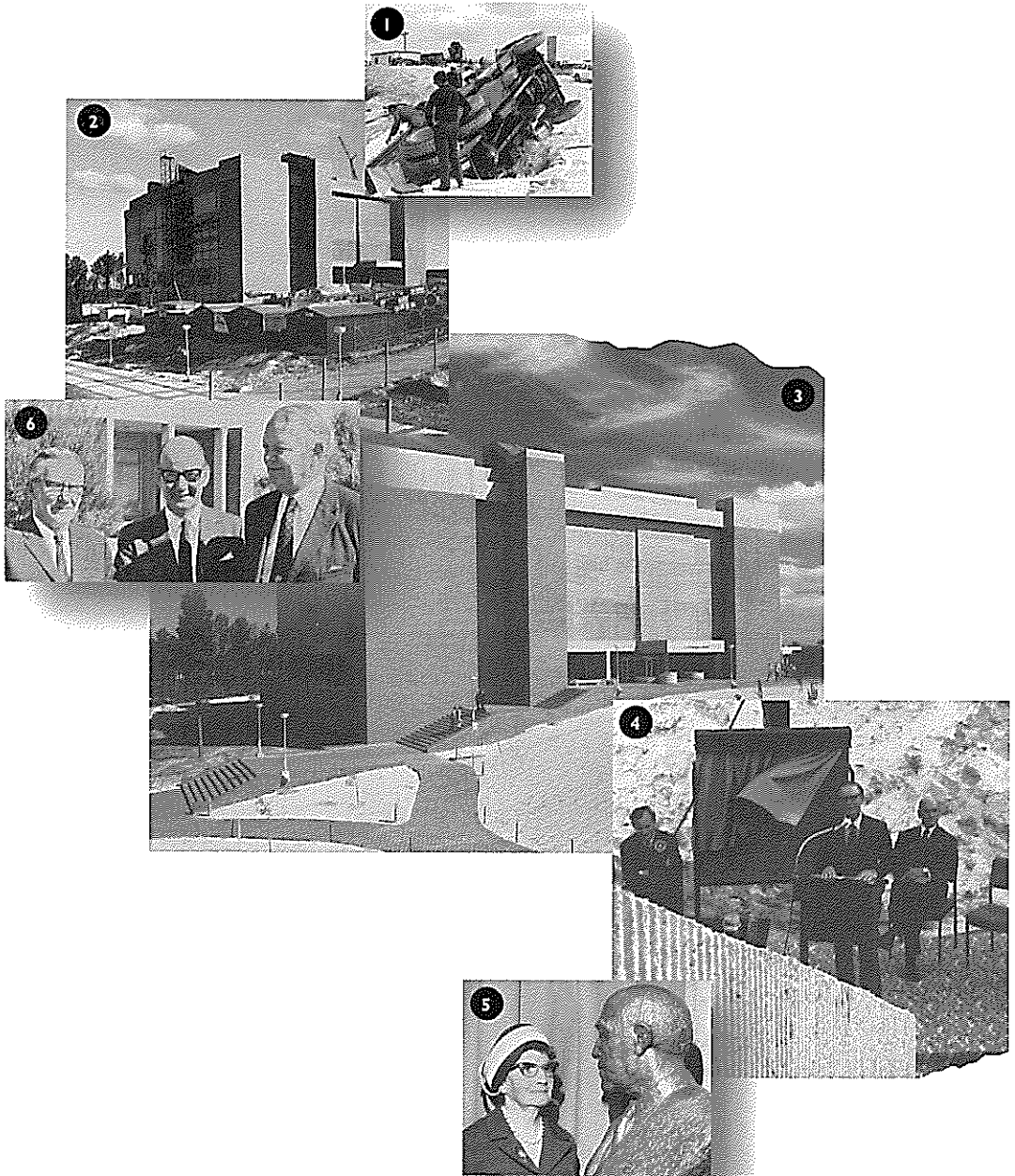
1 Sculptor Tom Bass (*left*), commissioned to produce an artwork for the architecture building, at a meeting in June 1970 with W. J. Paterson, inaugural chairperson of the art acquisition committee.

2 The architecture building nearing completion, 1970.

3 Tom Bass' metal sculpture at the entrance.

4 Internal multi-level galleries were a design feature.

5 H. D. Evans MLA (*standing*), who opened the building, and other members of the official party (*left to right*) Arnold L. R. Camerer, head of architecture; Roy Halliday Henderson, chairperson of WAIT Council; and A. K. (Tony) Russell, head of art and design.



1 A mishap during excavations on the library construction site, 1970.

2 & 3 The five-storey library building under construction; and on completion, 1971. The red brick and concrete monolith was Vin Davies' final architectural work at WAIT.

4 Opening of the Robertson Library in September 1972. WAIT Council Chairperson Roy Halliday Henderson is standing at the podium with C. F. Cayless, senior librarian at WAIT, to his right; and Premier John Tonkin, who was to open the library, to his left.

5 Ms Robertson with the newly unveiled bust of her late husband, Dr Thomas Logan ('Blue') Robertson, at the library's opening.

6 Sir Ian Wark (*left*) was shortly to retire as chairperson of the CACAIE when he visited the Bentley campus in April 1971 with T. B. Swanson (*right*), who would succeed him as chairperson. Accompanying them was WAIT Director Dr Haydn Stanley Williams.

for advanced education library improvement. During the visit to Australia by MacConnell's group in 1967, Allen accompanied the library specialist on tours of various colleges around the country and also participated in the very influential seminar on college planning held at Hobart in November.

Named the Robertson Library after WAIT's first council chairperson, and perhaps its most significant protagonist, the building was ready for use in 1971. It was then possible to complete the transfer of book-stock from the Perth Technical College and centralise library operations in a building designed for the purpose, for the first time. Before 1971, operations had been dispersed around several sites in temporary accommodation. The sheer bulk of the library building, forced into a multiple-storey structure because of the restricted site selected for it, somewhat intimidated those watching the early construction stages. Misgivings about the whole concept, however, were largely stilled when the building was completed and critics appreciated the well-planned and attractive layout and internal furnishings.

The Robertson Library was a recognised leader among the CAE libraries in Australia. Allen in 1971 was elected inaugural chairperson of the Association of the Librarians of CAEs and also president of the University and College Library Section of the Library Association of Australia. In these capacities he played a significant role in persuading the incoming Labor Commonwealth Government to contribute an unmatched grant of \$5 million to the colleges for the triennium 1973/75. The Robertson Library was also well advanced in its computerised acquisitions and accounting systems, while planning was underway for extended automation and for an ambitious reader services education programme.

In 1968 the administrative secretary of WAIT, Peters, persuaded the Management Board to phase in the appointment of private architects in the planning and design of new institute buildings.¹³ Not only did Peters favour dealing with private enterprise but he also became critical of delays, cost overruns, inefficiency and relative priorities accorded WAIT on the part of the government's Public Works Department. He persuaded the Management Board and the Interim Council in July to begin phasing out the Public Works Department responsibilities.

Vin Davies, seconded from the Public Works Department, joined WAIT as its executive architect, and the Management Board established a section of the WAIT planning office to oversee the capital works programme.¹⁴ Planning and control procedures for all site works were also completely overhauled, involving the development of master site development plans and the establishment of a committee for each building project and for the supervision of recreation and grounds development.¹⁵

The appointment of J. S. (Jack) Finney as institute architect in 1970 completed the process of separation from the Public Works Department.¹⁶ Following Davies, whose work effectively ended with the construction of the library, Finney launched the institute into a new phase of building during the period 1970-5, which broke away from the architectural philosophy of Davies.¹⁷

The next building, stage 1 of the commerce and social sciences building, was a radical departure from the rest and it excited some controversy when it was opened in 1972. Its lecture theatres were named after Leslie James Hollis, former head of accounting and commerce of the Perth Technical College, as well as former principal of the college. The second stage housed the whole of business and administration. It featured a nine-storey block, completed in January 1975, standing on a base containing lecture theatres, tutorial and seminar rooms, laboratories and student common-rooms. Its main lecture theatre was named after Edwin Harold Jones, who was head of commerce at Perth Technical College between 1956 and 1962 and was, later, deputy director of technical education.¹⁸

On 8 November 1974 Commonwealth Minister for Education K. E. (Kim) Beazley (Sen.) officially opened the general facilities building, the first of four stages in the engineering complex at Bentley. This effectively completed the transfer to Bentley of all the former Perth Technical College departments. Engineering had endured longer than any other department the sort of accommodation in which technical education had been traditionally housed. As mentioned in Chapter 1, some thought had been given at the time of the interim grant to bringing forward the design and construction of engineering buildings; but this had not been done, in order to ensure completion of the original planning commenced before the advent of Commonwealth assistance. The four lecture theatres were named after Erich Walter Shilbury, an eminent Jewish refugee from Hitler's Germany and Hayman's successor as the Perth Technical College's head of engineering, '...whose service to the State and the nation had been publicly almost anonymous but profoundly significant and highly skilled'. The foyer of the new building was graced by a magnificent sculpture commissioned from Tasmanian artist Stephen Walker.¹⁹

WAIT's architecture also embraced construction at the School of Mines at Kalgoorlie, the Muresk Agricultural College and the therapies department situated at Shenton Park. Chapter 6 is devoted to these developments, and includes the architectural aspects.

Landscaping and Grounds

The Public Works Department completed the master plan for grounds development at WAIT in 1968. By this time there had been several reallocations of land to accommodate a State primary school and the realignment of road systems around the new campus. WAIT nevertheless regained forty-seven acres adjoining Manning Road, which had previously been used by the Clontarf Orphanage for playing-fields. In the early years, access to WAIT was by way of Jarrah Road, Adie Street and Hayman Road, on the east. The natural approaches from the west did not materialise until Kent Street was extended to join Manning Road in the mid-1970s. Across the projected Kent Street extension, the State Housing Commission eventually opened up the Karawara Housing Estate, which was serviced by a small shopping centre. However,

during the early years at WAIT all the land to the west of the first buildings remained part of the pine forest.

Regarding the pine forest, the story of its establishment and development by the State Forests Department lies beyond the scope of this volume. It required particular research into the problems of fertilising the hungry soils at Bentley before the pines would grow at all. The plantation, along with others at Gnangara and Somerville, was developed under the Forests Department with the aid of gangs of unemployed men during the Depression years. Departmental authorities had retained the trees in the face of heavy pressures from urban expansion in the post-war period so that the mature timber could be sold.²⁰

Public Works Architect John Oldham drew up the first landscape plan for WAIT, in which large 'theme' trees complemented the projected buildings, with pines retained in forest lots, in copses and individually as a mature element in the scheme. The initial phase—lawns and major theme trees—concentrated on the broad aspects of campus development. Sporting and recreation facilities were the subject of a report by the State Education Department, which was followed up enthusiastically by Dr A. H. (Harry) Nash, who chaired the committee charged with planning the facilities. It proposed levelling 25–30 acres for the purpose, entering teams in local football and cricket competitions, the laying of cricket wickets, starting a rowing club and a tennis club, and establishing a sports centre to house squash courts and offices.²¹

During 1968 WAIT spent \$178,829 to develop a reflection lake, to reticulate grassed playing-fields and open space, and to loam Bentley's hungry soils. The lake, a prominent feature of the later WAIT landscape, was planned as a catchment for storm-water as well as an environment for the study of wildlife by biology students.²²

Staff and Interim Council dissatisfaction with the progress of Public Works Department landscaping during 1968 was a factor behind moves to have WAIT operate independently of government in capital works development. Staff were discouraged by the general appearance of the campus which, in their view, lacked the elements that would generate pride and prestige, attract students and present a better face to the community.²³ The Public Works Department presented a landscaping sketch plan in December and thereafter the playing-fields, lake and adjacent areas were tackled with more vigour. The council also introduced a site utilisation and development committee responsible for all aspects besides buildings and sporting facilities, the latter being given its own project committee. Nash chaired both committees until replaced by Peters—who took a lively interest in beautification—to free Nash for work on the engineering complex.²⁴

During 1970 the WAIT Council appointed Graham Press, formerly acting superintendent of the Yanchep National Park, as curator charged with speeding up the process of grounds development. He quickly presented an assessment of the situation which was critical of financial shortcuts adopted earlier, and he

argued for regular budgeting of grounds expenditure. He also launched a training programme for his own grounds staff.²⁵

Advice also was sought in 1970 from Dr J. S. Beard, the director of the King's Park and Botanical Garden, concerning horticultural development of the WAIT grounds. Committees concerned were asked to co-ordinate grounds development with a master plan for the whole Bentley campus. Beard's report (1970) outlined a number of radical changes to WAIT's horticultural planning, arguing for a more adventurous approach than Oldham had originally envisioned, which Beard believed to be safe and rather conservative:

The campus at the University of Western Australia is highly original in its treatment and successful too. While there is also a need for quick results at WAIT I believe that originality should be the keynote.²⁶

The Public Works Department contested Beard's views, emphasising the need to preserve a consistent philosophy of theme in the design, to complement the buildings and general plan.

The idea of using WAIT's art collection to enhance the architectural ambience of buildings and grounds came from a submission in April 1968 by A. K. (Tony) Russell, head of the Department of Art and Design. His intention was for works of art and sculpture to grace buildings and grounds in ways that would '...humanise and liberalise the general environment'.²⁷ Internal gardens would become another feature of institute beautification, planned for each building from the design stage. Particularly effective was the Japanese garden, established in the central courtyard of the commerce and social sciences building in which Japanese language was to be taught. WAIT Director Williams and Japan's consul-general in Perth, Kumao Okazaki, had co-operated with the State government to engage an expert designer, E. Ogawa; and the WAIT Council set aside \$2,000 for the project. The project was eventually finished by Ken Nakajima.²⁸

By 1973 the WAIT art collection contained 180 individual pieces by Australian and international artists, collectively valued at \$50,000. Funds came from the Rural and Industries Bank and from the T. L. Robertson Memorial Fund (established after Robertson's death in 1969). In a separate development the WAIT Council set aside 0.5 per cent of the cost of each building, for a commissioned major work of art having relevance to the educational purposes of the building and the institute as a whole.

Completion of the WAIT capital works programme in the triennium 1973/75 meant that institute attention could be directed towards a five-year plan of landscape development, planned to commence in spaces that would not be disturbed by later construction, and then extend as new buildings were completed. The Institute Planning and Resources Board engaged landscape consultants Blackwell and Cala to provide detailed plans and specifications.²⁹ In the event, WAIT was fortunate in being able to use REDS grants during the 1973/75 triennium to speed up grounds development.

In the meantime, meetings during 1974 between the interested parties thrashed out plans for road systems in the Bentley campus area. Most



1 Leslie James Hollis, former principal of Perth Technical College (1961-7), and outspoken advocate of the establishment of WAIT, at the naming of the Hollis Lecture Theatres.

2 The nine-storey business and administration building, completed in 1975, towers above the commerce and social sciences building which it adjoins. In the foreground is a reflection pond, landscaped as part of WAIT's administrative complex.

3 J. S. (Jack) Finney, one-time lecturer in WAIT's Department of Architecture, was appointed institute architect in 1970.

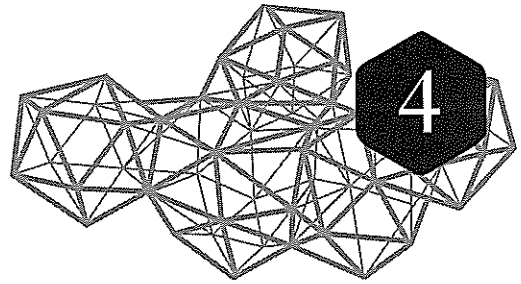
AUSTRALIA'S JAPANESE BUSINESS COMMUNITY WAS A MAJOR SPONSOR OF THE JAPANESE GARDEN ESTABLISHED IN THE COURTYARD OF THE COMMERCE AND SOCIAL SCIENCES BUILDING, 1972

4, 5 & 6 Landscape architect Ken Nakajima (*squatting*) marked out the garden for WAIT's grounds curator, Graham Press (*rear*), while Lecturer in General Studies Masa Ogawa interpreted; the garden under construction; and on completion.

significant were the completion of Hayman Road as a major throughway from Como past the northern edge of the campus, and the completion of Kent Street extension through to Manning Road. Quite apart from lowering the level of local residents' frustrations at traffic snarls created by students' vehicles, these improvements greatly enhanced the aesthetics of entry to WAIT via a main drive (Beazley Drive, named after K. E. (Kim) Beazley (Sen.), the Commonwealth minister for education). They also placed the Guild House and Rotary International House close to commercial outlets at Karawara. Car-parks constructed between 1975 and 1980 lay to the north beyond the Student Guild and the business and administration building, and to the south near teacher education and art and design.³⁰

✱ For the most part, developments in the 1970s did not disturb the Davies site plan. The introduction of schools at WAIT left intact the concept of a campus having at its centre the Robertson Library. Only art and design, and education lay to the southern periphery, somewhat removed from the mainstream of institute activity, but even they were located within the campus road system.

A spectacular addition was made in 1979 with the construction of an international hockey stadium. This formed part of the State's celebrations for the sesquicentennial year and involved co-operation between WAIT and the Western Australian Men's Hockey Association. With the aid of a \$500,000 grant from the Commonwealth government as its gift to Western Australia, the hockey centre contained an international standard artificial-grass pitch and a stadium. The Men's Hockey Association, which raised \$250,000 matched by the State government, received full support from the WAIT Council, whose chairperson Alan Barblett had been a prime mover in the venture. The stadium was opened in April 1979 with the holding of the World Hockey Championships and the meetings in Perth of the International Hockey Foundation and the International Umpires' Conference. The opening and championships provided the institute with first-class sporting facilities and marked the first installation of an artificial hockey pitch in the southern hemisphere.³¹



Equal but Different: The WAIT Alternative to University Education

It was one thing to establish WAIT, another to create at Bentley an institution that could stand alongside UWA with some modicum of status equality and a distinctive role in higher education as well. The binary philosophy of higher education, endorsed by the Commonwealth government following the Martin and Wark reports, set broad parameters to the new CAE system, but its implementation produced challenging opportunities for the new institutions. In any event, WAIT in a matter of ten years grew from 2,000 to 10,000 students, to become one of the largest educational institutions in Australia. It also became the nation's most comprehensive CAE.

The task essentially was to move the institute out of a culture associated with technical education into that of higher education, without being overpowered by the model presented at Crawley by UWA. This required the setting of institute-wide policies that would sit within the Commonwealth's guidelines for advanced education, yet establish a special niche for WAIT both locally and nationally. Given the second-class status accorded technical education, getting the Western Australian community to accept that WAIT could be a legitimate partner with the universities in higher education would be difficult.

Governance reforms, dealt with in Chapter 2, were only part of the answer. Much would depend on how the WAIT mission was communicated to a perhaps sceptical community; how the 'equal but different' philosophy was translated into awards and staff quality and into broad educational policies; and how well the institute dealt with creating its own physical environment and internal communities of staff and students. The proof, of course, would lie in public perceptions and professional acceptance of institute courses and graduates.

The present chapter addresses the broader issues of educational mission, award and staff policy, and staff and student communities. WAIT's academic

departments and branches and the further development of institute architecture and grounds (the physical environment) are dealt with in later chapters.

Academic Mission

At the time WAIT commenced independent operation, Commonwealth responses to the Martin committee focused hard on the applied sciences and technologies. The 'equal but different' philosophy underpinning Australia's binary system of tertiary education was fundamental to the Martin committee vision for Australian tertiary education, a view later encapsulated in the terms 'college of advanced education' coined by the Wark committee in 1967.

On the issue of promoting equality with universities, one way the Martin committee sought to raise the public profile of technical education was by 'increasing the scope of the "humanities" side of technical college work'. Other possible measures included improving student amenities, creating a truly cross-disciplinary campus and recruiting outstanding academic staff.¹ The Wark committee took these notions further in a chapter devoted to liberal education in the colleges, focusing upon 'humanising' technology courses through communication studies, extra-curricular activities, library services and vocational courses beyond the hard technologies.

Williams and Robertson shared this wider concept of technology, which Williams spelt out in more detail in a 1969 address to staff:

...I think we need to foster a different interpretation to that which the community has commonly employed for the term 'technology'; that this needs to be understood in the broad sense as the application of knowledge for human benefit. And that there is not only a technology of the sciences and of engineering but we are increasingly, in fact, talking about technology of the social sciences and I don't mean technology in the social sciences. I don't mean the use of this sort of thing in computers and what have you, but the approach of the application of systematic, experimentally derived knowledge to human benefit...We are not a narrow institution. We are, in fact, a broad one. We are not an institution unconcerned with human welfare.²

Moving the whole of higher education at the Perth Technical College to Bentley, into a planned new campus, formed part of the broader conception—a total break from the culture associated with cramped city sites, dingy buildings and a dated philosophy of technical education.

The Jackson committee had suggested that renaming WAIT the Western Australian College of Advanced Education would give expression to that broader vision. But the idea drew vigorous opposition at WAIT where the original name was now well accepted. When discussed in the Interim Council during 1968, various alternatives were canvassed, including 'The Western Australian Institute of Technology and Commerce', which was suggested by Nash. The acronym 'WAIT and C', however, drew such guffaws that the matter was pursued no further. The State government agreed to retain the name 'Institute of Technology'.³

Under Williams and Peters, WAIT's functions were subjected to careful analysis as part of the planning and review process. A distinctive feature of this

was the employment of management techniques taken from industry and commerce. Williams himself indeed was elected president of the local branch of the Australian Institute of Management. To those who asked whether he was a member by virtue of interests in management education, he would ask them whether they were managers of businesses with \$80 million budgets!⁴ Peters, as mentioned earlier, established a reputation with UNESCO in Paris for his work on institutional planning and management, contributing papers to a UNESCO seminar in Paris on management and decision-making in educational planning.⁵

During the period 1970–2, when preparing for the 1973/75 triennium submission, WAIT conducted seminars among staff to examine the question of institutional productivity, which later fed into the submission itself. Part of that process involved refinement of institute goals through techniques employed traditionally in industry, for example by using the Delphi Technique in identifying institutional goals. Doctoral studies by J. G. (Jack) Williams (educational administration) and Joseph Braysich (WAIT's first graduate admitted to doctoral studies overseas) added empirical evidence in this exercise.⁶

The study by WAIT Director Williams and Peters identified six main ideas embodied in WAIT's purposes:

1. to meet the needs of industry;
2. to develop society-oriented values and attitudes;
3. to develop broadly based economic and material benefits to the community;
4. to provide specific vocational preparation (useful knowledge and skills) as a direct benefit to the student in terms of occupational advantage;
5. to provide a professional education enabling students to facilitate industrial and economic development and cope with changing conditions; and
6. to provide a professional education that primarily benefits students in terms of creativity, interest in field of study, ability to communicate, professional responsibility and personal ethics.

The studies by J. G. (Jack) Williams and Joseph Braysich demonstrated a close correlation between official WAIT goals and the goals espoused by staff, students and administrators where the institute's utilitarian/vocational and occupation-related preparation was concerned. Engineering and applied science students held irredeemably utilitarian views about higher education. Students in art and the social sciences, as anticipated, were rather more liberal in their view of WAIT's objectives. WAIT drew the majority of its students from State and Catholic schools (sixty-three per cent and twenty-five per cent respectively), only twenty-five per cent having come from private schools. Those from private schools (traditional suppliers of students to universities) held more liberal views about institute goals.

The findings provided ammunition for the Academic Board, which in 1969 had appointed a committee headed by Eric D. Atkinson (general studies) to prepare a policy on liberal education for implementation across the institute. Accepted in May 1970, this set five principles which every institute course was

expected to reflect in its objectives, content, teaching strategies and student values. Detailed proposals included the mounting of special English courses for all students, experimentation with common first-year programmes, the promotion of 'community' activities, and the exploitation of social science, humanities and art courses as a means of widening students' intellectual and cultural experience.⁷

Despite these laudable intentions, there were serious obstacles in many professional courses, which were so packed with content that only a fourth year of undergraduate study was thought capable of satisfying the time demands of liberal education. Not surprisingly, not all professional programmes responded positively to the new policy.

Selling WAIT to the Community

Communicating to staff, students, employers and the wider public an understanding of the new Institute of Technology presented significant challenges in the early years. The idea of a CAE was new and many people harboured misconceptions about it. Robertson, in his inaugural graduation address in June 1968, identified three of these:

1. that WAIT was 'merely the Perth Technical College under a new name and with a new address';
2. that 'the Institute [is] a rival of the University of Western Australia'; and
3. that 'the Institute is or will be an inferior institution to the University'.

He made the further point that '...a clear understanding by the schools of the functions of the Institute is necessary and [so also is] an awareness of what it can offer intending students'.⁸ At the time of Robertson's speech, higher education in Western Australia was synonymous with UWA—anything else hardly warranted serious attention.

Robertson, Director Williams, the senior management, Peters and the administration, and academic staff—all became heavily involved in marketing WAIT throughout the State. The assistant directors in 1967–8 faced a daunting schedule of speaking engagements at career nights in city and country schools; Peters ensured that WAIT was strikingly represented in handbooks, brochures and other publicity material.⁹ He established an institute publications service as well as gaining approval for the appointment of a public relations officer, A. F. (Bert) Wells, who joined WAIT in 1969.¹⁰ A film about WAIT, completed in 1970, reached thousands of school students and parents and citizens' associations. It was updated in 1972, in colour, with spectacular aerial shots of the Bentley campus (by then maturing quickly) taken from a helicopter.¹¹ With the co-operation of WAIT's Department of Art and Design, the institute also mounted regular public displays.

The Art and Design Department figured prominently in other ways in WAIT's promotional efforts. In 1968 the head of the Art and Design Department, A. K. (Tony) Russell, proposed to the Management Board that WAIT commission and purchase works of art—including the work of students—

for display in its buildings and grounds. He also proposed that budgets for capital works should include an amount for appropriate works of art. The Interim Council responded favourably, establishing an institute art policy designed to complement collections in the State Art Gallery and at UWA, while reflecting the nature and role of the institute.¹² A \$5,000 donation from the Rural and Industries Bank made possible the first annual Invitation Art Exhibition in 1970, at which thirty-four leading Australian artists were invited to exhibit their work on the proviso that WAIT have the option of purchasing any of them. Ten new works were acquired as a consequence of the exhibition.¹³ The first art purchase, an abstract painting by a former Perth Technical College and then WAIT student, Robert Bell, was hung in the reception foyer of the central administration building in November 1968.¹⁴

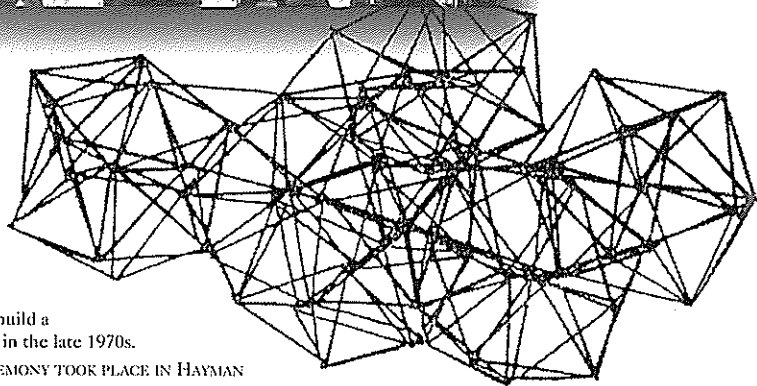
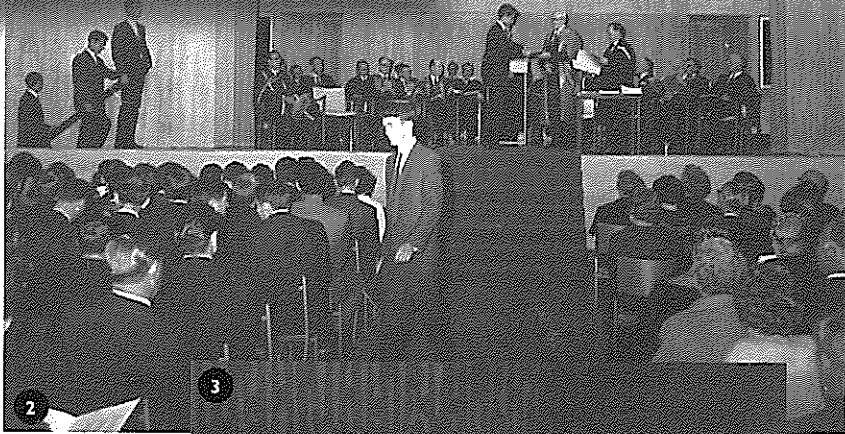
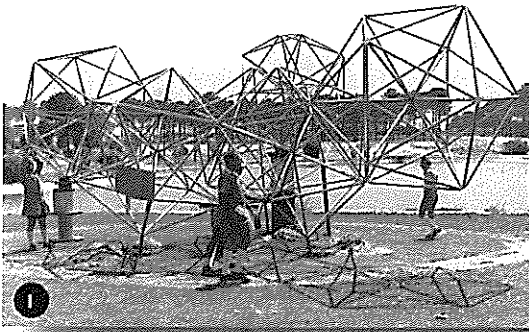
The Art and Design Department was also responsible for designing WAIT's academic dress, first used in the graduation ceremony of 1973. The matter of academic dress had been discussed at the Perth Technical College from the late 1950s, but had been shelved as being premature and, perhaps, even somewhat pretentious at the time. The college graduation ceremony nevertheless matured in the 1950s to assume dimensions that attracted media coverage, lifting its public profile beyond levels commonly ascribed to technical education. The academic dress question reappeared at WAIT during preparations for the first graduation ceremony in June 1968, when Robertson presented 168 students with awards in the new 'Main Hall' (later called Hayman Hall). But it took several years before WAIT attained the self-confidence to commission designs for academic dress. In 1973 Russell prepared the necessary drawings, and at the WAIT Council meeting of 18 April 1973 Steve G. Forte modelled the standard black undergraduate gown, accompanied by a stole bearing the WAIT crest and appropriate colours for different awards.¹⁵

WAIT's corporate symbol was created in 1968 by Art and Design Lecturer David Walker. This imaginative logo, which later became widely recognised throughout the local community, was based on a tetrahedron. The symbol soon became standard on all institute publications, letterheads and handbooks.¹⁶ A decade later, Laboratory Manager in Mechanical Engineering William Gordon co-operated with the art and design staff to produce a three-dimensional model for display at graduation ceremonies and other public occasions.

The official institute publication, the *Gazette*, started publication in 1968 as a means of communication with staff, students and the outside world about events and achievements at WAIT. Its format was upgraded in 1973 to feature works of art from the WAIT collection.

So effective were WAIT's promotions that in 1974 the State committee for the Hoover Marketing Awards asked the institute to enter the competition. This invitation, itself unique for an educational institution, resulted in WAIT's exhibit receiving a ranking of 'Highly Commended'.¹⁷

Promotions aside, the key to WAIT's ultimate success would be the support of industry. Robertson, at the 1968 graduation address, stressed his desire '...that industry generally [will] regard this institution as its own—specifically designed to cater for its requirements', and that an '...enthusiastic understanding of the



1 Engineering and art staff joined forces to build a three-dimensional model of the WAIT logo in the late 1970s.

WAIT's 'HISTORIC' FIRST GRADUATION CEREMONY TOOK PLACE IN HAYMAN HALL ON 14 JUNE 1968

2 One hundred and sixty-eight graduands lined up to receive their awards from Interim Council Chairperson Dr Thomas Logan ('Blue') Robertson.

3 Administrative Officer (Academic) R. J. (Bob) Gardiner led the procession of senior academic staff and dignitaries down the aisle, between 'plain clothes' graduands on their left, and invited guests on their right.

Background: David Walker's original design from which the WAIT logo was developed.

Institute's aims by...customers in industry, commerce, management, administration and in cultural activities...' would be achieved.¹⁸ WAIT decision-makers, from the outset, encouraged visits by industry leaders, held seminars and public addresses at Bentley, liaised with politicians and community leaders and quickly set up advisory committees for all courses.

Awards

The Wiltshire Report of 1969 laid the basis for a nationally accredited system of advanced education awards, from associate diploma to masters degree levels. Subsequent Commonwealth action recognised State powers to approve awards according to guidelines, but established an Australian Council on Awards in Advanced Education empowered to register awards and issue guidelines and to work closely with State agencies. Each State nominated two representatives to the new council; in Western Australia's case: WAIT Director Williams and Professor T. A. Priest (from UWA's Faculty of Education).¹⁹

The significant breakthrough here was official acceptance of bachelor and masters degrees in advanced education. In negotiations with the State government, Williams had vigorously supported the case for degree and post-graduate awards. University authorities countered that such awards would not only transform WAIT into a university (which was precisely what the government was determined to prevent) but also undermine the international reputation of Australian degrees. Professor Colsell Sanders, inaugural chairperson of the WATEC, supported Williams' case, but advised caution in assessment of degree courses and staff competence to teach them. Owing to the uneven quality of WAIT staff at the time, he maintained that the universities would be required for some time to train advanced education staff for teaching at degree and post-graduate levels.²⁰

The State government in 1970 amended the WAIT Act to empower the institute to award degrees.²¹ Soon afterwards WAIT began presenting most of the associateship courses, recast as bachelor degree programmes, for accreditation through the WATEC. The first WAIT courses presented for degree recognition were in accounting, applied physics, applied chemistry, pharmacy, social science and surveying.²² At the masters level the first was a programme in administration.²³ The new opportunities released a virtual flood-gate of pent-up pressures for degree and post-graduate awards among both staff and professional bodies.

In keeping with Commonwealth policy, WAIT accepted the three-year degree model for bachelor courses in advanced education. At the same time, however, professional societies in engineering, surveying and the therapies were upgrading to a four-year model. Institute policy (1971) established masters programmes of two-year duration after graduation, and graduate diplomas of one-year duration; but care was taken to preserve the two-year associate diploma courses, which enabled WAIT to respond quickly to emerging community demands. WAIT did not intend at this stage to be a 'degree only' institution.²⁴

Staffing Policy

Prior to the establishment of WAIT, staffing policy at the Perth Technical College had become a serious consideration as its tertiary standing consolidated. Needed reforms included the abandonment of appointment and promotion procedures, bound by public service appeal systems that favoured seniority rather than academic merit. Salaries and conditions derived from Teachers' Union awards also were inappropriate to an institution aspiring to equal status with a university. Staff members were ambivalent. They wanted the status and freedom of university staff while retaining the conditions and protections of school teachers. A group of staff in 1964 formed a Professional Officers' Association, which they saw as a more appropriate vehicle for negotiations with the college and divisional management than the existing State School Teachers' Union.

At the time WAIT opened, advanced education salaries varied from State to State whereas universities enjoyed nationally approved scales which the Commonwealth helped the States to fund. The Commonwealth Sweeney committee advocated parity with university salaries for college academics with comparable qualifications and performing comparable work, but such salaries were subject to assessment of qualifications and performance at a point just short of the top salary ranges concerned.²⁵

The States, including Western Australia, were reluctant to accept the Sweeney proposals because of likely flow-on effects to school teacher salaries. State Treasury officials in Western Australia were prepared to concede salaries up to ninety per cent of university levels at lecturer level, but jibbed at equivalence in the senior lecturer range. WAIT staff, in their view, lacked the high academic qualifications and research records of university staff. Reflecting the prevailing view of technical education, they assessed the role of senior lecturer in advanced education to equate more with that of senior masters in secondary schools. In any event, the States were obliged to concede ground when the Commonwealth accepted the Sweeney scheme for introduction at the Canberra CAE.²⁶

While the States delayed decisions, advanced education salaries lagged behind salary increases to technical and teachers' college lecturers awarded in Western Australia during 1969. WAIT staff, co-operating earlier on an understanding that salaries would be adjusted once the Sweeney inquiry was over, now threatened industrial action. The State government accepted Commonwealth policies in October, although it instituted salary bars two increments short of the top of salary scales at both lecturer and senior lecturer levels. The WAIT Council in February 1970 accepted the parity principles, with heads of department to be paid at university reader levels and assistant directors at professorial level.²⁷

As regards salary bars, the WAIT Council was on stronger ground than in many other CAEs, since all academic staff had been recruited by open advertisement or by invitation. Although most of the initial staff came from the

Perth Technical College, only those considered suitable had been invited. Many others, lacking the necessary qualifications or preferring to retain public servant status, had not entered the race. In the circumstances, the WAIT Council felt justified in assuming responsibility for making the necessary judgements, by establishing qualifications and performance criteria, writing staff contract documents and introducing a review process. At the time, Minister for Education Lewis had taken a strong line on progression, which he demanded should establish equivalence with university qualifications and responsibilities.

The industrial scene was complicated by further council action to introduce a system of annual appraisals intended to encourage staff development. Although this was accepted by the ASA, the idea of combining appraisals with assessments for salary progression was rejected.²⁸ Williams himself became dismayed at the adverse impact on staff relations of the subsequent disputation.²⁹ The outcome, however, was the formation of a joint WAIT Council-ASA committee to improve communication; subsequent negotiations with the WATEC led to acceptance in August of a progression system without salary bars. WAIT's Educational Development Unit (discussed later in this chapter) prepared documentation for the annual review process.³⁰

Salaries of the director and assistant directors were also increased in 1970. The State Treasury was apprehensive, however, about proposed levels which would have taken senior staff levels beyond those of senior public officials and judges. The accepted salaries placed assistant directors at the level of university professors. The director and deputy director were placed on a par with senior public servants.³¹

Inflationary pressures soon eroded the value of the new salary awards, leading institutions in 1971 to seek increases of up to fifteen per cent. The Commonwealth government and all State governments, alarmed at the financial implications, now instituted a completely new salaries inquiry (the Campbell inquiry), which did not report until June 1973 after (typically) dealing first with university salaries. In the meantime, delays in dealing with salaries by the WATEC and the State minister's office added to staff discontent in the colleges. Triennial reviews of salaries by the Commonwealth Academic Salaries Tribunal were a problem in any event, since academic staff regularly lost ground against comparable groups receiving annual reviews. From 1973, however, salaries passed totally into the federal arena, following agreement from the States to shift financial responsibility for higher education to the Commonwealth government.

Staff conditions at WAIT meanwhile broke from the mould of the Technical Education Division. Although teaching loads based on 12-20 hours of student contact followed the Perth Technical College pattern, 'penalty rates' for evening teaching, differential payment for women and men, and the old twelve-week vacation arrangements were abandoned. Alternative superannuation schemes were also available, while tenure was subject to confirmation after one year of probation.³² The council approved a study leave scheme for staff in

February 1969, which provided for three months' special leave matched by staff contributions of long-service leave, annual leave or leave without pay.³³ Financial assistance was confined to 'topping up' assistance from other sources. Such leave was not granted as a 'right', although the council was anxious to encourage staff to improve qualifications and experience.

This was important if institute staff were to achieve credibility in higher education. Yet WAIT also needed staff with industry experience—what Williams jokingly called 'dirty backgrounds'—who were also committed to teaching. A tension existed between encouraging staff to extend their professional and industrial experience while promoting further academic study and research. Staff pursuing higher degree studies were granted release from teaching, a provision that encouraged large numbers to enrol for post-graduate degrees.³⁴ Ironically, however, such staff found acceptance to doctoral studies easier at overseas universities than at UWA. Post-graduate qualifications became increasingly important for entitlement to university level salaries after acceptance of the Sweeney Report; although the criteria sought to balance higher degrees and research with professional qualification and experience, many staff (especially those passed over for promotion) perceived academic achievements to be decisive.

Career progression, or promotion, involved more than simply salary equivalence with university staff. The Sweeney committee had argued for promotion as a reward for high performance and as an incentive to staff. At WAIT, however, senior lectureship and higher level posts were determined, as they had been under the previous technical education system, in relation to student numbers. When such positions were established, they were filled by open competition. This denied possibilities for rewarding (even retaining) good staff, a situation that became critical by 1971, when more than eighty staff were virtually stranded at the top of the lecturer range with many more expected to join them.

The WAIT Council–ASA committee in 1972 eventually reached agreement on a compromise promotions scheme to preserve budgetary flexibility in the institute. This included agreements to recruit more tutors, to abandon special concessionary teaching conditions for senior lecturers (another provision dating from technical education times) and to introduce short-term contract staff.³⁵ The WAIT Council inaugurated the promotions scheme in April 1973, with the first promotions being made in January the following year.

Admissions

Catering to the needs of 'students with different kinds of interests' translated into more flexible admissions requirements than those for conventional university matriculation. Williams himself advanced a scheme that used the State's Leaving Certificate examinations, as did UWA, but with less prescription as to subjects. Equivalent qualifications too, were given sympathetic consideration.³⁶ At Williams' suggestion, another significant concession was to admit students holding a two-year Technical Education

Division certificate. Those holding a Technical Education Division diploma also were admitted, often with advanced standing. In addition there were special provisions for mature-age students (of more than twenty-three years) who completed WAIT examinations or who held other relevant qualifications.

During 1968–9 Western Australia's system of public examinations underwent a major overhaul in response to changes occurring in secondary education generally. WAIT readily co-operated with the WATEC in discussions and seminars on tertiary admission, which eventually led to the introduction of a Tertiary Admissions Examination and the establishment of a Tertiary Institutions Service Centre supported jointly by the tertiary institutions. Under the scoring system introduced from 1970, WAIT accepted an aggregate of 270 for admission to associateship (later degree) courses, with a required spread of five subjects including English.³⁷ A score of 250 points qualified for entry to diploma courses. However, departmental heads retained a great deal of discretion, and the mature-age and Technical Education Division entry arrangements were unchanged.

In comparison with UWA, WAIT tended to admit students with lower aggregates and to rely less on student performance in the special 'matriculation level' papers set at the time. It was also not unusual for students who had failed in first-year university courses to seek admission at Bentley. This situation (eventually resisted at WAIT) and the lower aggregate minimums tended to reinforce popular perceptions of WAIT as inferior to, rather than different from, the university. It was not till after 1971, when demand for places at Bentley outran the supply, that admission scores for certain WAIT courses began to rise. Quotas became necessary in such areas as art, information processing, pharmacy, medical laboratory technology, applied geology, occupational therapy, physiotherapy and social work.³⁸

Part-Time and External Study

Promoting part-time study was consistent with the philosophy of advanced education endorsed by the Commonwealth through the Wark committee, and was actively pursued at WAIT. The emphasis became increasingly necessary during the 1960s as UWA shifted its priorities to full-time study, research and post-graduate students.³⁹ Indeed WAIT's initial success owed a good deal to its ability to meet the needs of students denied access to UWA, which in its earliest years had relied heavily upon part-time students in the humanities and social sciences.

In addition UWA was anxious to quit its responsibilities in external (correspondence) teaching, an area identified as a high priority for WAIT by the Martin, Jackson and Wark committees. WAIT commenced planning the transfer of external studies from the Technical Extension Service in August 1967, and established an administrative unit in December to handle administration. In contrast to technical education practice, at WAIT the conventional academic staff taught external students in courses identical to those offered internally, with the mainstream departments responsible for instruction.⁴⁰

During 1968 the Management Board appointed a professional officer to strengthen the administration of external studies, and also allowed time for staff to prepare courses. Administrative Officer R. J. (Bob) Gardiner drew up comprehensive guidelines for administration, and Williams himself prepared a policy statement. His idea was that WAIT would extend its programmes to country districts by way of external studies, using modern technologies, regular tutorial assistance and short on-campus schools. This, it was believed, would lead to demand for local services and eventually to the establishment of regional centres.⁴¹ These might in time form the nucleus of a regional CAE or a more comprehensive institution. The first such centre was established in Bunbury in 1972.⁴² External study was also considered useful for students in the metropolitan area who, for one reason or other, could not attend classes at Bentley.

B. H. (Berry) Durston joined WAIT in 1970 as its first senior education officer, to head the External Studies Unit. He quickly revamped the administrative framework, regularised study guides, persuaded the Robertson Library to set up a special external students' collection, started an external studies week at Bentley, and oversaw a dramatic increase in the numbers of external enrolments. By 1971 there were 605 external students, most enrolled in accounting, administrative studies, and art and design. In 1971 he undertook a tour of the North-West of the State, widely publicising the WAIT programmes. The Bunbury Advanced Education Centre, situated alongside the Bunbury Technical College, opened in 1973.

Teaching Excellence

A principal focus of WAIT's philosophy and that of the Wark committee was excellence in teaching, an area considered to be relatively neglected in universities.⁴³ There were practical reasons for WAIT's commitment to teaching, especially reducing the heavy student attrition rate in higher education generally. This particularly affected part-time and external students and had become the focus of national criticisms of higher education. It was a particular issue raised by Williams in his address to staff in 1969, when reflecting upon the accountability and productivity of higher education institutions.

WAIT initially built from a base of Perth Technical College staff, who had been required to complete in-house courses of teacher training. Many of the inaugural leaders and lecturers held formal qualifications in education, which had been necessary for promotion within the Education Department. Although this policy had always been resented, even derided, it did ensure a high level of competence in teaching, assessment and curriculum development. Although the Interim Council freed time for formal training to continue at WAIT, pressures of expansion meant it was reduced to a series of short seminars on teaching methodology, initiated by Cecil Emil Carr in 1968.⁴⁴

Nonetheless the impact of staff commitment to education was evident throughout the institution. Dufty, for example, worked hard on regularising

grade distributions across the institute, while Williams drove hard on WAIT's accountability for student failure.⁴⁵ Nash, for his part, not only pursued his research interests in educational television but also conducted a study of performance among electrical engineering students.⁴⁶ De Laeter in physics, Sears in accounting and business studies, Carr in administrative studies, Dufty and others in the social sciences, Liveris in chemistry, the staff in art and design, and many others remained committed to the learning concerns of WAIT students.

One outcome of this interest was the decision to shift to a semester organisation of the academic year. Had it been introduced when first mooted in 1967 by Nash and Dufty, fresh from studies in the United States of America, WAIT would have been in the forefront of Australian higher education institutions.⁴⁷ As it was, the debate dragged on for several years, partly influenced by technical education traditions and established UWA practices. When the system was finally adopted in 1974 it was no longer an innovation, having been accepted at many universities.⁴⁸

In a related policy WAIT introduced summer sessions to enable students to repeat units they had failed or to speed up completion of courses by taking additional studies. To allay ASA concerns about teaching loads, the WAIT Council in 1969 affirmed that summer teaching was voluntary, but asserted that the 35-week teaching load was not restricted to the conventional academic calendar.⁴⁹

In 1969 Williams established an Educational Development Unit, which was the first of its kind at a CAE.⁵⁰ (Similar units were already functioning at the University of Melbourne and at Macquarie University.) The unit began operations in 1970 under the leadership of Alan J. Lonsdale from the Gordon Institute of Technology at Geelong, Victoria. He was joined soon afterwards by another Victorian, Dr Leo Foster. Providing information on staff development and education-related research, evaluation and course development, the unit's work was a practical outcome of WAIT's commitment to teaching.⁵¹ Part of that commitment included the allocation of staff development money towards mini-teaching fellowships, enabling staff to review and improve teaching methods and course structures.

In a separate development the Wark committee (influenced by Williams) persuaded the Commonwealth government to allocate substantial funds towards educational research and development in the colleges. Grants under this scheme—the first for research in the college sector—funded studies by Nash of engineering students, and by Ray Hardy of the tertiary education needs of the mining industry.⁵²

The establishment of an educational media committee in 1971 was intended to promote the use of modern audio and visual technologies in teaching, as part of a general overhaul of institute organisation. Art and design staff D. H. Simpson and J. M. Whitcombe had floated the idea during 1969, and Peters had promoted it also as a means of WAIT developing its own reprographic services. The committee advised the Management Board on all

relevant developments and liaised with a technical committee to provide advice on co-ordinating a comprehensive audio-visual system for the whole institute. Media activities were under the control of the Educational Development Unit.⁵³

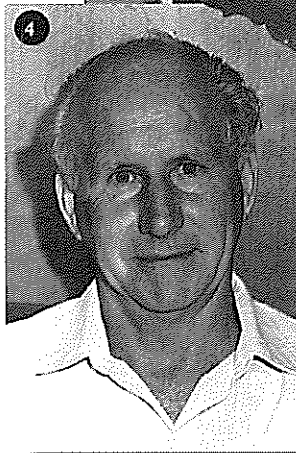
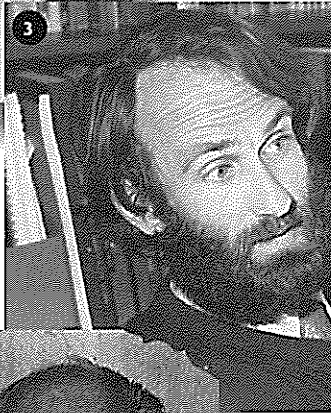
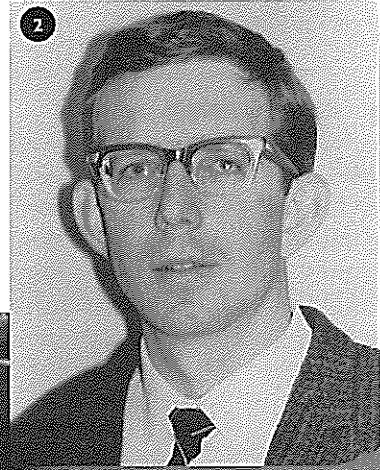
Establishment of a student counselling service in 1970 complemented the Educational Development Unit.⁵⁴ The new service had been promoted by Williams, who had been involved in starting systematic guidance services in the State Education Department. Headed by John W. Winfield, former careers counsellor at UWA, the new service formed part of a broad-ranging institute attack on the 'human and economic wastage' occasioned by inadequate student services, failure and personal problems.

WAIT-AID Ltd

WAIT-AID Ltd, incorporated in August 1971, was designed to achieve four main objectives: to help in the advancement and development of science and its practical application to industry and commerce through applied research; to evaluate and develop inventions; to advise on problem-solving in the social and commercial sciences; and to facilitate community (continuing) education. De Laeter, in the Physics Department, initiated discussion about forming the company in 1969, which was intended to work along the lines of UNISEARCH, a similar organisation at the University of New South Wales. Industrial Development, Railways and the North-West Minister Court favoured supporting the scheme over a three-year trial period. Coombe followed up the proposal in 1970 after visiting several other universities, but Williams himself took over the project when Coombe died, seeing it through to the establishment stage.⁵⁵

The first directors of the new organisation—Williams, de Laeter, Dufty, Tom Gosling and Reginald C. Buckett—appointed as manager Dr Roy Green, an experienced manager of scientific and engineering research projects in Canada and also of the Australian Atomic Energy Commission. Green immediately launched a publicity campaign that netted contracts worth \$51,000 in the first year (1972). Sixteen departments and seventy-five staff members were involved in wide-ranging activities, with a bias towards mechanical engineering, physics, mining, architecture and chemistry. The largest single contract, however, was a joint project among psychology, social work and home economics. Green himself ran short courses and seminars, and also hosted a meeting of representatives of comparable centres, held at Melbourne.

Green resigned two years later and was succeeded by Don Manser, who shifted somewhat the original priority on industrial research. A marketing consultant with specialist experience in Southeast Asia, the Middle East and East Africa, Manser had been employed by the State Department of Industrial Development as head of trade promotion. He opened up new possibilities in assisting industrial and business consultancies through use of WAIT facilities and personnel.⁵⁶



1 Dr Roy Green, inaugural manager of WAIT-AID Ltd.

2 B. H. (Berry) Durston, appointed in charge of the External Studies Unit, 1969.

3 Alan J. Lonsdale came from Victoria in 1970 to lead the Educational Development Unit.

4 Dr J. G. (Jack) Williams, appointed head of the Department of Management in the mid-1970s, was to become involved in WAIT's first off-shore programmes for overseas students.

A scheme initiated by Dr Mare Liveris in 1973 partly drew upon experience with WAIT-AID projects. It involved the idea of establishing interdisciplinary 'centres' to promote collaborative work across disciplines and departments, with a focus at first on teaching rather than research and development.⁵⁷ The centres were to make a significant impact at WAIT in the later 1970s.

The WAIT Community

Establishing governance structures, dealing with staff and award equivalence and introducing broad institutional policies were all easier tasks than creating an ethos for the new institution. WAIT's beginnings in technical education presented special obstacles, while the shadow of UWA was pervasive. Developing a sense of belonging to a WAIT community, taking pride in the institution, feeling confident of the value of its academic purposes and participating in intellectual, cultural and social activities beyond the classroom—all these required a little time to develop. The architectural environment helped, for WAIT was planned from the outset according to a consistent philosophy of design and development. In the second stage of development, the main hall, cafeteria and student facilities provided a focus for student life that had been missing in the old Perth Technical College.

Creating a sense of community among students at WAIT nevertheless presented impressive problems. The majority were of mature age and studying part-time, and regarded the institution in mainly functional terms as a place to attend classes, perhaps eat a meal, and then to depart. WAIT lacked the full-time enrolment, age-range homogeneity and the social class connections of UWA. WAIT's students also had strong vocational motivation, with many already in the work-force, or on cadetships entitling them to 'day release' study on campus. Most of the teacher trainees in applied science and social sciences were on bonded scholarships and the vast majority of business and administration students were already in employment. The concept of 'community' perhaps meant more to the substantial minority of Asian students who studied full-time at the Perth Technical College and, later, at WAIT, bringing to the institution a different cultural background at a time when multiculturalism in Australian higher education was in its infancy. Among the bulk of students, a sense of community was difficult to identify.

Nor did WAIT's associateship courses make much concession to the ideal of a 'rounded' professional. At least in its formative years WAIT was intended to produce 'professionals of the second rank'. Whatever the rhetoric about equality, it was the job of the universities to produce the élite professionals. WAIT students lacked self-confidence and consequently felt resentful about the lack of recognition of their courses. Robertson, Williams and others strove to dispel the view that WAIT was simply the 'Tech' moved out to a more salubrious location.

It was against this background that Williams and his staff worked to establish a student union. In July 1967 the Management Board called a meeting of student representatives from each department to explain WAIT's

policy regarding student facilities, and the intention to delegate responsibility for their management to a properly constituted student union.⁵⁸ Afterwards a working party of six students headed by Nash, with assistance from Peters and Gardiner, studied the situation in more detail. In September the students agreed on an interim constitution, which during 1968 underwent substantial modification, with Nash and Lecturer in Chemistry Steve Errington providing valuable assistance.⁵⁹ One small hitch developed when Minister for Education Lewis, reflecting his party's abhorrence of the term 'union', forced WAIT to adopt the name 'Guild' (which was already in use at UWA).⁶⁰ At the December 1968 meeting the institute Interim Council approved the Student Guild constitution and finalised guild fees. The constitution provided for a guild council and two associated bodies: the activities council and the sports council.⁶¹ The first Guild Council included Tom Silvan (president), John Booth (vice-president), Jamie Morley (secretary) and Kevin Collins (treasurer). Silvan, a pharmacy graduate enrolled in a business course, was particularly influential in the first year of the Student Guild and he later figured prominently in establishing an Alumni Society. His first priorities were to bind together the different student groups separated physically on three different sites, promote self-confidence and pride among the WAIT students, and obtain representation for students on WAIT councils and committees.⁶²

The WAIT ASA came into formal existence on 15 February 1968, although it had had its beginnings much earlier. In 1963 a Professional Officers' Association was formed at the Perth Technical College. It was snubbed by the Education Department and the State government, which both dealt through the official State School Teachers' Union. The fully constituted ASA committee, elected in February 1968, included Stan T. Waddell (president), Dr B. R. Hammond (vice-president), Ron Black (secretary/treasurer), and V. Adams, A. J. Butchart, S. Munsie, Dr Warren Walker, Cecil Emil Carr and Con Stacey.⁶³ The new association quickly joined the newly formed Federation of Staff Associations of CAEs and then approached the institute's Interim Council for official recognition.

Concerning institute social life the Management Board took up the matter in February 1968, promoting discussion initiated by Nash about the formation of societies and clubs.⁶⁴ Non-academic staff who attended a meeting in May called for the establishment of a social club for all staff and proposed an institute ball as its first function.

Staff wives, at a meeting in April 1968 called by Mildred Williams, formed one of the first clubs. Named the Karina Club, its first priorities were to greet new staff and foster friendships among staff wives and families, but later included promoting cultural and educational interests. In October the Karina Club organised WAIT's inaugural ball, held at the Hayman Hall, and later in the year a cocktail party to celebrate the end of WAIT's first year of operation.⁶⁵

Institute clubs quickly multiplied in response to official encouragement and individual initiatives. The Debating Club began in October 1968 with the

motion that 'the age of majority be reduced to eighteen'. Nash meanwhile worked to organise a WAIT Football Club. WAIT football started with an informal match in which the institute's team defeated the Public Works Department combination, but only after the game had been extended till WAIT hit the lead!⁶⁶ On the cultural side, Dr Stan Kailis, Theo Naarstig, W. (Bill) Morgan and Shirley Cook inaugurated an institute Music Society, while David Addenbrooke, then a tutor in English, started the WAIT Dramatic Society. Its first production *Look Back in Anger* was held early in 1969. *Under Milkwood*, produced by Wendy Watson, followed shortly afterwards.⁶⁷ An institute Film Society started in 1969, as did the WAIT Rowing Club with staff member Con Stacey as its first president. WAIT Council assistance enabled the club to purchase two second-hand fours, augmented later by a racing pair donated by local businessman Glen den Hollander.⁶⁸ Tennis and rugby came later, in 1971, once the facilities were available, and in that same year the institute held its first golf day.

As WAIT became more fully concentrated on the Bentley campus, it became better identified as a distinctive higher education community. To cope with rising student numbers in 1972, Williams insisted that class scheduling extend through the entire week, including lunch-time, to relieve pressure on the WAIT cafeteria.⁶⁹ This marked a break from the 'day off' mentality of the Technical Education Division, which had concentrated teaching between Tuesday and Thursday each week. WAIT also began to provide decentralised cafeteria facilities in kiosks and coffee shops.

first
units * The opening of the guild building in February 1972 established the first purpose-built home for student activities and the Guild Council. Designed by R. J. Ferguson and Associates, the building broke completely from the Davies philosophy, and was intended to provide "...a kind of home; a place where [students] could feel quite remote from "school"."⁷⁰ It incorporated space for student and staff gatherings, commercial outlets, branch banking outlets, sporting and recreation areas—including a licensed bar—and squash courts. In 1973 stage 1 of a sporting pavilion was completed and the next year construction went ahead on the WAIT boathouse (named after Con Stacey), the first pair of squash courts, and all-weather basketball and tennis courts. Earlier, during 1971, the Duke of Edinburgh had officially opened the WAIT ovals (one being named 'Edinburgh Oval') during a visit celebrated with public displays at Boans Ltd department stores and Hayman Hall, dramatic productions and the suspension of classes.⁷¹

Student Guild President Theo Naarstig was the driving force behind a seminar in 1971 seeking ways to enhance community aspects of staff and student life at WAIT. A significant outcome was the introduction of community seminars and public lectures. The first two seminars: 'What's Wrong with Society?' and an address by Peters on 'The Times—They are a'changing', were followed next by an evening lecture by Industrial Development, Railways and the North-West Minister Court on 'The Changing Pattern of Resource Development for the Future', which was attended by more than 100 guests.⁷²

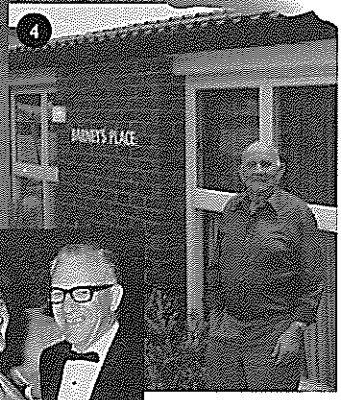
Health and chaplaincy services were introduced at WAIT during 1972–3. The health service started from initiatives of Student Counsellor John Winfield, while chaplaincy services were made possible by Anglican Archbishop of Perth Geoffrey Sambell.⁷³ The first chaplains were The Reverend Robert Holland, Anglican Rector of Manning, and The Reverend Father Geoff Aldous. Child-care facilities established during 1974 were the result of Student Guild action, assisted by a special grant from the WAIT Council.

It was not till 1975 that WAIT opened a staff club, when the retirement of Barney Doolan as site supervisor at Bentley provided the opportunity for his cottage to be refurbished and reopened as 'Barney's Place'. This proved to be a popular watering-hole for staff till a new and more salubrious WAIT House was established in 1981. Doolan, a colourful and brutally frank ex-prisoner of war in Burma, served as part-time barman.⁷⁴

From the outset Williams had encouraged student representation on all major institute committees. In 1969, before the Student Guild was formally established, Williams invited student participation on the cafeteria, public relations and student centre project committees. He met regularly with the Guild Council, shared WAIT Council minutes with the guild and even attended Guild Council meetings when asked.⁷⁵ In spite of some staff opposition, students also were admitted to the School of Mines advisory committee.⁷⁶ During 1971, student representation on the WAIT Council was included in amendments to the WAIT Act, and students also were added to membership of boards of study, the Academic Board and (later) the Institute Planning and Resources Board. WAIT policy followed models favoured at UWA and several other universities in permitting student members full voting rights on the council and its committees.

When the first students (Student Guild President Michael Megaw and Geoffrey West) took their place on the WAIT Council in 1971, it was none too soon, since the fees issue of 1971–2 raised the temperature of student dissent.⁷⁷ Representation on the WAIT Council at least gave students direct access to decision-makers. As campus politics heated up during the 1970s, the leading student politicians could never claim their views were ignored, as the WAIT Council and senior management adopted progressive policies toward student activities.

The first guild presidents, Silvan (1969) and Naarstig (1970), were mature students, able and willing to work closely with Williams and the WAIT administration. From 1971, feverish electioneering for the presidency saw it pass into the hands of younger and more radical students, frequently from the social sciences; for example Wayne Poulsen (he served the last few months of Megaw's term after the latter's resignation in August 1971); his successor in 1972, Peter Quinn; and Rod Cole. Quinn, a Marxist who outrageously defied protocol, was farewelled with some relief by the WAIT Council. His successor, Pragasamoorthi Krishnasamy, a 22-year-old Malaysian student, restored the regimen of good manners, made contributions to discussions about the role of



THE KARINA CLUB ANNUAL BALLS PROVIDED A SOCIAL FOCUS FOR A DIVIDED WAIT COMMUNITY. AMONG THOSE WHO ATTENDED THE INAUGURAL BALL ON 18 OCTOBER 1968

1 Examinations Officer R. C. (Rod) Pope and Ms Pope; 3 Chemistry Lecturer Dr Gerard Leahy and Ms Leahy; 5 Assistant Director (Architecture and Engineering) Dr A. H. (Harry) Nash and Ms Nash; 7 Geology Lecturer W. (Bill) Morgan and Ms Morgan.


2 The Duke of Edinburgh visited WAIT's Bentley campus in March 1971 to open the Edinburgh Oval. He was accompanied by Student Guild President Michael Megaw (*foreground*) and WAIT Council Chairperson Roy Halliday Henderson (*far right*).

4 Barney Doolan outside his former home, which was to house WAIT's first staff club.

6 WAIT Rowing Club's foundation president, Con Stacey (*left*), with State Minister for Tourism and Recreation Frank Stewart at the opening of the Stacey Boathouse in April 1975.

8 State Minister for Industrial Development, Railways and the North-West (later Sir) Charles Court giving an address at WAIT in July 1972.

the council and was the driving force behind guild sponsorship of moves to establish residential accommodation. Student Guild president in 1974–5, Ross Barrett, brought the residential matters to a successful conclusion, though returning the guild to a more radical temper.

 The guild's extremist leaders, although enjoying some notoriety, were elected by only the small minority of WAIT students who cared to vote or attend meetings. Student apathy was a constant issue, explained partly by the vocational orientation of most WAIT students and the disinterest—and perhaps bemusement—of the majority of mature-age, part-time and external students. Students in professional and applied science courses, more conservative in behaviour, were more hampered in joining the political fray by heavy class schedules than were their social science colleagues.

Radical causes included Vietnam, police brutality, the PLO, apartheid and gay rights. It was on issues like fees and parking that wider student support was forthcoming. A protest occupation of the Robertson Library during 1971 quickly won concessions on access times from a sympathetic WAIT administration.⁷⁸ More serious was the parking issue, which boiled over into menacing confrontations that resulted in the eventual sacking of a staff member.⁷⁹ Guild confrontations with Dr Dolph Warren Zink, appointed dean of the School of Business and Administration in 1973, were engineered by student politicians anxious to target him as a representative of the capitalist classes.⁸⁰ Students created a furore when lecturer Thomas Callicoar's contract was not renewed, storming Zink's office and charging him with political bias. The situation became extremely uncomfortable for Zink, who later left WAIT for senior company work. Outside Bentley, student activism included protests by the art students at James Street, which influenced the transfer of art and design to Bentley in 1969; and vigorous student protest at Kalgoorlie. Although the council refused to panic when faced by more extreme student activity, the more serious incidents motivated new institute statutes dealing with student discipline, as well as procedures to deal with staff dismissal and 'control'.⁸¹

The Guild Council introduced a newspaper as a means of communicating with students on three sites. Craig Smith, an architecture student, was the inaugural editor of *Aspect*, first issued on 14 April 1969. After he left WAIT, the guild tried other and less expensive publications: *WISGO* (What Is Going On?), a weekly news sheet edited by Peter Quinn (1969–72); and *Spectrum* (Tim Dawe, 1969–72). In 1972 Rod Cole unilaterally changed the name of the newspaper to *Grok* (from Heinlein's *Stranger in a Strange Land*). The guild, concerned about libel action against the newspaper, negotiated its incorporation. Later editors—Colin James, Paul Bridges, Kevin Dovey and Frank Sharkey (1973), and Valeric Humphrey (1975)—all encountered in varying degrees the wrath of Guild Council for following particular policies.

On the lighter side, the guild in August 1969 initiated George James Week, the brainchild of Stephen Drake-Brockman and Tim Dawe, intended as a week of outrageous entertainment to bring together students from the St George's Terrace and James Street sites. The first week featured processions, mock

demonstrations and funerals, films, plays and sporting fixtures, a visit by 'Wizard' Ian Channell, and a birthday ball at Canterbury Court.⁸² George James Week became an annual event enjoyed with some trepidation by WAIT authorities, who often found themselves the target of treasure hunts that allotted points for removing hinges from doors and for the capture of senior officials.

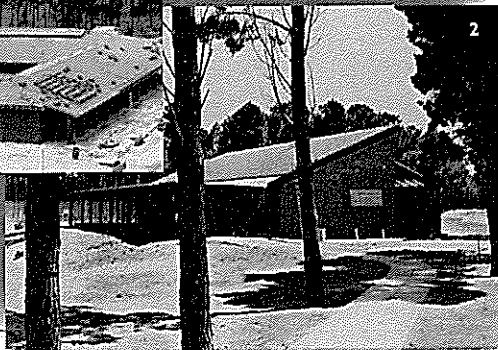
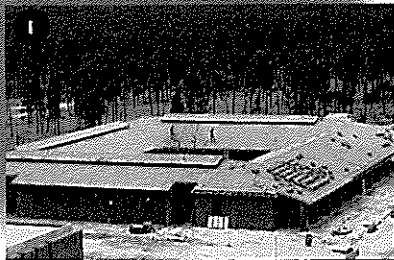
Notwithstanding the more difficult incidents, Guild Council responsibility for administering student facilities invariably won WAIT Council support. Loans for student amenities were regularly approved, for example with respect to commercial enterprises: the licensed Student Tavern, child-care facilities and the guild building complex. Student management often fell short of the faith shown in it, since in these years few guild enterprises were ever profitable. One president even tried to solve a conflict with Student Guild staff with his fists!

The Student Guild approached a similar turning-point, as did WAIT as a whole, when in 1977 the newly elected Court Government introduced legislation to enforce voluntary membership of university and college guilds.⁸³ The object was to restrict the ability of left-wing student associations to spend money raised by compulsory fees. However, the tertiary institutions—WAIT included—got around the legislation by renaming the guild fee a recreation and amenities fee, which nevertheless was passed to the guild for expenditures on student facilities.⁸⁴

Under attack from outside, the guild lost the extremism of the early 1970s. After Ross Barrett's two terms (1974 and 1975), the presidency went to more middle-of-the-road students: Tim Ryan (1976), social sciences; Wayne Carter (1977), architecture; and Ken Gibbons (1978 and 1979), biology. Partly as a measure to shake student complacency but also to highlight the guild's importance to the State government, Gibbons in 1979 took the extreme step of closing down all guild facilities.⁸⁵ His action certainly galvanised student interest, which led to a protest demonstration by 1,000 students, 500 of whom later marched on Parliament House to protest at the Court Government's approach to Student Guild controls.

For the guild the period 1975-9 was dominated by its increasingly heavy financial and administrative burdens. During 1975 the WAIT Council, against some opposition, agreed to lease all recreation and sporting facilities to the guild. In 1978 Gibbons was instrumental in gaining guild approval to fund a guild building at Muresk, officially opened in 1979.⁸⁶ Other of Gibbons' schemes included a second-hand bookshop, student insurance, allocation of block grants to student clubs, and increased limits to guild student loan arrangements. Since none of them were profitable, all were a drain on guild finances.

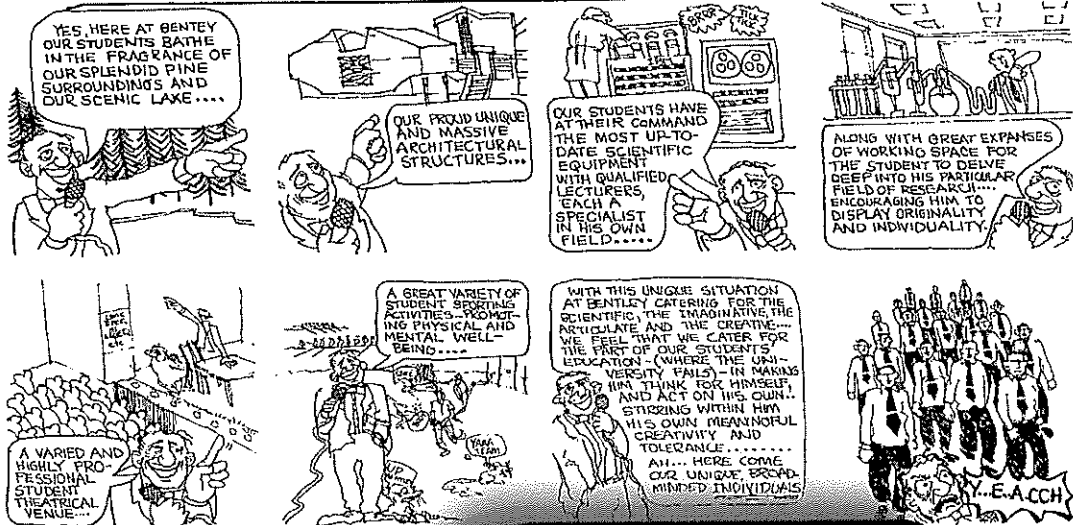
By 1975 there were student clubs for squash, rugby, martial arts, netball, hockey, archery, volleyball, basketball, cricket, soccer, tennis, football, baseball, rowing, badminton, flying, diving and motorcycling—all affiliated with the guild. During the year, WAIT hosted a national CAE sports carnival, comprising teams from five colleges competing in eleven sports.⁸⁷ A second national carnival, in 1979, which attracted 800 students from twenty-one



3

SYD DOGMA

by **TM**



1 The Student Guild building under construction, 1971.

2 The completion of the first stage of the sports pavilion in 1973 provided changerooms and refreshment facilities for WAT's sports clubs.

3 Tim Pearson cartoon in student newspaper *Aspect*, 11 June 1969.

4 Interim Student Guild Council, 1969. (a) Jim Tognolini; (b) Jamie Morley; (c) Stephen Drake-Brockman; (d) John Booth; (e) Craig Smith; (f) Rob Menzies; (g) Tim Dawe; (h) Sheila (surname unknown); (i) John Surman; (j) Esther (surname unknown); (k) Tom Silvan.

colleges, was able to use the new hockey stadium.⁸⁸ WAIT experienced success in these competitions, but travel costs meant that the record was less impressive when the students attended competitions held in other States.

Leaner economic conditions in the 1980s meant that WAIT teams mostly forewent representation in the national college competitions. At home, however, the guild sponsored the Ajax Shield, conducted between the WAIT schools and departments, which commenced in 1981.⁸⁹ Later, in 1984, the guild initiated an intervarsity challenge between the State's tertiary institutions. WAIT's teams won the first Intersvarsity Shield, involving seven sports and 1,000 competitors. Again in 1984, the guild, aided by a grant from the WAIT Recreation Board, upgraded cricket pitches on Edinburgh Oval and erected a clubhouse for the WAIT Football Club.⁹⁰ Earlier (in 1983) the WAIT Council provided financial assistance to enable a guild-sponsored team to travel to Penang to play in the six-a-side Perta hockey carnival, and two years later a hockey team from the University of Science, Malaysia (at Penang) reciprocated.

In keeping with the more sober economic and political temper after 1975, the student newspaper *Grok* became somewhat less radical. Under its first female editor, Valerie Humphrey, International Women's Year served as motivation for interminable and graphic articles on women's sexuality and women in employment and politics. *Grok* gained a new editor in 1976, Ray Coffey, who was a WAIT journalism graduate and responsible for lifting the production quality of the paper. His WAIT 10th anniversary issue was notable, even though the guild itself virtually ignored the events of that year.⁹¹ Coffey (later to become the editor of the Fremantle Arts Centre Press) was followed by Leon Morris who, from a family background in printing, substantially overhauled the office, equipment and publication side of *Grok*. A well-presented series of issues by Morris during the State's sesquicentennial year (1979) included a witty send-up of the official State celebrations, as well as a highly supporting coverage of an Indian Ocean Arts Festival conducted in October.

Positive relationships with students and the Student Guild were carefully nurtured by Williams' successor, Dr Don Watts, during his period as director of WAIT. This not only continued traditions from earlier times but also conformed closely to Watts' own strongly held convictions as an excellent teacher, and as one with a long and happy connection with Currie Hall during his time at UWA. In any event, Watts' inherently gregarious and even boisterous nature appealed to students and, especially, the guild executives. They were supportive of staff promotion procedures, which guaranteed student input into teaching evaluations, while Watts also called upon student interests in offsetting ASA resistance to redundancy arrangements.

Watts and the WAIT Council provided solid support for the Student Guild during 1981-2, when the Liberal-Country Party Coalition Government tried to legislate more effectively for voluntary membership of student associations. In particular, the minister for education asked institutions to account for spending of the compulsory recreation and amenities fees. The guild, when it asked for

support on the issue, received strong endorsement from the WAIT Council, which in 1981 informed the minister for education, W. L. (Bill) Grayden:

...the Student Guild had been responsible in providing student services which the Institute would have difficulty in replacing; the student facilities worked to the ultimate benefit of all students; and that most of the student services would need to be retained if WAIT's hard-won image is to be preserved.⁹²

Watts himself informed Grayden:

If the Institute's fears are to be realised with respect to diminution...in educational quality (particularly in terms of students' personal and social development) then the community as a whole will be paying more for an inferior product.⁹³

The council reissued a statement originally prepared in 1979 detailing guild responsibilities, and provided an account of expenditure under the recreation and amenities fees arrangements.

Where the guild presidents were concerned, Watts valued close working relationships, although Roy Duncanson as president in 1980 nearly destroyed confidence by passing on to the Labor Party confidential information from a council meeting in May. This concerned possibilities of the Court Government using aspects of WAIT's ideas about a technology park for electioneering purposes in 1981. Duncanson, having told Watts what he had done, then resigned, before a hastily convened Student Guild Council meeting could move a no-confidence motion in its president. Duncanson some weeks later emerged as the endorsed Labor candidate for the seat of Northam.⁹⁴

His successors worked more successfully with Watts on the political and other issues of the day. Steve Wakeham, the president in 1981, and Adrian Fisher, in 1982, were heavily involved in fending off the threat of government interference in guild affairs, and also contesting the trend of Commonwealth financial support for Australian higher education at the time. Wakeham, however, led a group that completely rewrote the guild constitution to close off loopholes associated with election problems encountered in 1978 and difficulties generated by Duncanson's resignation.⁹⁵ As it happened, much of the heat went out of the guild membership issue following the election in 1983 of the Burke Labor Government. The new minister for education, Robert (Bob) Pearce, rescinded the legislation of 1977.⁹⁶

WAIT student politics, after Duncanson's departure, entered a much less radical phase, marked by internal faction fighting and a general slide into apathy. Even the student newspaper, renamed *L'Grok*, concentrated on issues immediately affecting student interests. Meanwhile, presidents Adrian Fisher (1982), Peter Fagan (1983), Paul Grove (1984), Stewart Sturgess (1985) and James Best (1986) battled to attain quorums at meetings, reactivate interest in elections and keep solvent the various guild enterprises.⁹⁷ Stage 3 of the guild building, which opened in August 1984 at a cost of \$300,000, indeed added to the guild's financial responsibilities (and more particularly its liabilities).⁹⁸ Former president Gibbons emerged over this period as something of an *éminence grise*, influencing elections and policies behind the scenes. But none of

the new presidents was wildly radical and nor were the students, except on one or two issues. In 1984 the WAIT students voted to disaffiliate from the Australian Union of Students.⁹⁹

Student Housing

Funds to enable construction on Guild House and Rotary International House featured strongly in WAIT's 1973/75 submission. Agricola College at Kalgoorlie had already been established with Commonwealth help, which favoured development in regional centres; at Muresk, residential accommodation dated back to the 1920s. At Bentley the situation proved more difficult because of the high priority accorded conventional construction. Under an arrangement with the Student Guild, Brother D. F. Cummings of the Clontarf Boys' Orphanage offered some relief in 1970 by providing accommodation for fifteen WAIT students in the orphanage's 'George James House'.¹⁰⁰

Detailed planning commenced in 1968 with the appointment of a project planning committee chaired by Dufty to consider accommodation requirements for Muresk students attending classes at Bentley. This produced specifications for a hall just north of the WAIT cafeteria to serve 150 students, but the location was moved, on Student Guild President Silvan's advice, to a site further away. WAIT Architecture Lecturer Geoffrey Brown was commissioned to prepare the preliminary sketches. Dufty meanwhile initiated a student study (by Leslie Barnes, Garry Feeny and Clive Gilles) into student accommodation needs.¹⁰¹

The Wark committee displayed special interest in Brown's concept of a four-group dormitory, which the WAIT Council accepted in July 1969;¹⁰² when estimated costs outran expectations, Brown was forced to reconsider his proposals. Following an overseas trip in 1971, he canvassed other alternatives. These led to the commissioning of a study by R. J. Ferguson and Associates, incorporating separate motel or terrace housing-type units to house up to fifty students. The costs, however, caused the scheme to be deferred.

The South Perth Rotary Club meanwhile initiated a co-operative venture, involving seventy of the State's Rotary Clubs, to erect an international house on institute land.¹⁰³ WAIT staff Nash and Howard 'Topper' Girvan-Brown, both active Rotarians, pushed the project with Rotary and in 1972 the WAIT Council readily agreed to the scheme. It envisaged a facility for 100 students costing \$300,000 to be financed from Rotary contributions of \$75,000 and matching grants from the Commonwealth government and State government. Premier Tonkin agreed to match the Rotary contribution and, following discussions with the Commonwealth, the Rotary International House proposal was given a high priority for the 1976/78 triennium.¹⁰⁴

Although Rotary presented its first cheque to WAIT in May 1973, by then the building costs were rising and the State government had withdrawn from the funding of higher education. Girvan-Brown then embarked on a concerted effort to raise the required money from the co-operating Rotary Clubs. However, sponsorship by Rotary and a co-operative approach to management

of Rotary International House ensured its ultimate acceptance. It required some vigorous lobbying of Prime Minister of Australia Malcolm Fraser by Premier Charles Court in 1976 to finalise Commonwealth financing, but construction eventually started in 1976, and Rotary International House was officially opened by the governor of Western Australia, Sir Wallace Kyle, in 1978.¹⁰⁵

The 1973 Student Guild president, Krishnasamy, revived the other residential hall project, which the guild undertook to finance through its own borrowings. Some student politicians opposed the Rotary scheme, which embodied the sort of capitalist initiatives and institute controls they abhorred. The guild favoured non-collegiate, unit-type housing on land which the State Housing Commission made available on the western side of Kent Street. With encouragement from WAIT authorities, the guild in 1973 formally sought a grant from the Commonwealth to match amounts it anticipated raising through loans.¹⁰⁶ WAIT Director Williams himself approached the Advanced Education Council regarding the unique features of the guild scheme, which involved WAIT passing the land title concerned to the guild, the guild raising necessary loans, and the guild managing the residences when finished.¹⁰⁷

The guild project encountered many difficulties as anticipated costs soared past initial estimates of \$750,000 to nearly \$1 million. The WAIT Council, in the circumstances, extended every assistance in the form of vesting the land in the guild, charging peppercorn rentals and spending \$50,000 from Special Funds for site works. It even promised management arrangements that would satisfy both the Commonwealth and lending institutions, which were understandably chary of student control and funding. Krishnasamy's successor, Ross Barrett, in July 1974 visited the Commonwealth education minister, K. E. (Kim) Beazley (Sen.), in Canberra to convince him that the project was viable. The Commonwealth insisted on WAIT being the authority responsible for it, although prepared to concede the leasing of land and delegation of management to the Student Guild.

The design undertaken by Geoffrey Brown was for a three-storey, non-collegiate institution, providing cluster units of bed/study rooms linked to a core comprising a living-room, a kitchen-dining area and bathroom-toilet facilities.¹⁰⁸ In honour of Krishnasamy's personal drive to realise the scheme, WAIT gave his name to a sealed pathway joining Guild House to the main campus. This remains the only part of the campus named after a WAIT student.¹⁰⁹

Typically, though perhaps regrettably, Guild House opened without any ceremony on 21 February 1977. All 150 units immediately filled, with a further 350 applicants on waiting lists.¹¹⁰ A guild housing board administered the building while residents elected a tenants' committee. Successive committee presidents Rod Christmas (1978) and Gless Ritchie (1979) started a social club to arrange parties, car rallies, barbecues and sporting events. Residents organised busy bees to tidy up the grounds, and produced a magazine *Memories of Guild House—1978*. A duplicated news sheet ('Mozzie' or 'Mosquito') followed in later years.

The opening of Guild House was the occasion of a clash between the students and the Court Government in 1977. The press had made great mileage out of Guild House regulations that allegedly did not exclude the possibility of unmarried students living together.¹¹¹ Premier Court took up the matter with Williams, who stoutly defended the Student Guild which, in turn, stoutly defended its independence in running Guild House.¹¹²

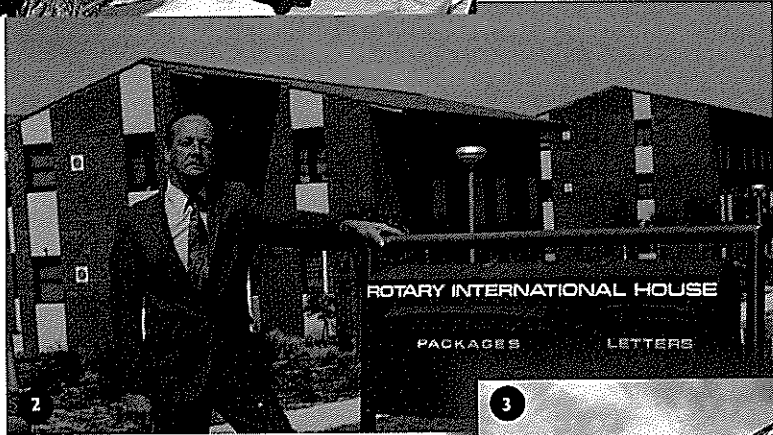
Guild House activities tended to revolve around the more boisterous side of Australian youth culture, with little obeisance paid towards the cultural or intellectual life typically associated with university colleges or residential halls. This possibly reflected something of the heavily utilitarian and vocational culture of WAIT itself, which was relieved only by the more flamboyant activities of students in the arts and design, the humanities and social science.

Rotary International House, by comparison, enjoyed a formal opening ceremony conducted by Governor Kyle on 14 April 1978. The building provided for eighty-four students, selected on a basis that would ensure a mix of Australian and overseas students.¹¹³ In later years, however, rising residential fees pushed down the proportion of Australian students.

Rotary International House was administered by an officer of the WAIT administration, but faced more financial difficulties than Guild House. Not only was it smaller, but it was not subsidised by the guild. This led to discussions during 1979–80 about possibilities of amalgamating Rotary International House and Guild House, and perhaps bringing them into closer relationship with Agricola College and the Muresk student house. But the guild took (perhaps unnecessary) fright at the prospect of WAIT control and refused to co-operate. Another proposal to ease the financial strain, which proved abortive, was to add accommodation at Rotary International House in co-operation with the Australian–Asian Association of Western Australia.¹¹⁴ The Rotary International House tenants' committee chairperson, Patrick Foo, meanwhile obtained help from WAIT, from student fees and from Rotary districts 945 and 946, to build a students' tutorial and common-room. Other clubs in the area also helped with socials, barbeques and other forms of sponsorship.

WAIT Alumni Association

Tom Silvan, the inaugural Student Guild president and a pharmacy graduate, in 1970 took up with WAIT Director Williams the possibility of establishing an alumni association.¹¹⁵ An interim committee began drafting a constitution in 1972. In April an informal gathering was organised at WAIT, attended by 100 graduates and their families who were given a tour of the now rapidly expanding campus. In July the inaugural annual dinner of WAIT alumni was held at the WAIT cafeteria, and in August the first annual general meeting was held. The first alumni board was elected, comprising Silvan (president), Phillip Salinger, Tim Dawe, Neil Botterill, John Caddy, Benvenuto Fazio, Michel Kitney, Gerard Lace, Andy Lendich, Peter Sanders and P. K. Schipp.



1 Opening of Rotary International House, April 1978.

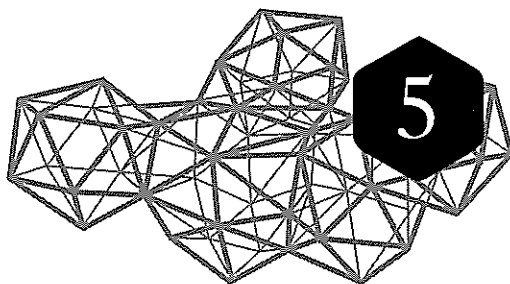
2 Former British Army officer, and dedicated Rotarian, Howard ("Topper") Girvan-Brown worked tirelessly to raise funds for the establishment of Rotary International House, 1977.

3 Governor of WA Sir Wallace Kyle examined the street sign bearing his name as WAIT Director Dr Haydn Stanley Williams (*left*) and WAIT Council Chairperson Justice Alan Barblett watched.

4 Former Student Guild president Pragasamoorthi Krishnasamy at the naming of a sealed walkway after him in 1977. WAIT Director Dr Haydn Stanley Williams is in the background.

In its first years the Alumni Association, assisted by the WAIT administration, quickly moved to establish a presence at the institute. Under the president, Silvan, the association's first action was to commission a portrait of Williams by Art Lecturer Benjamin Joel, which was hung in the Robertson Library in 1975.¹¹⁶ A first annual dinner, held in July 1973, was marked by the issuing of certificates to 145 foundation alumni members. The WAIT Council, for its part, invited participation by an Alumni Association representative. Especially interesting was Silvan's initiative, during a holiday in Singapore and Malaysia in 1973, to establish contact with WAIT graduates in Asia. Local representatives were arranged: James Yip in Singapore, Yap Chuan Hwa in Kuala Lumpur, and Rosalind Wong in Penang. A survey of WAIT overseas students in 1973 indicated the future potential: more than 200 from Asia, with 129 from Malaysia and twenty-seven from Singapore.¹¹⁷ The association also broke new ground when in 1973 it sought membership in the Australian University Graduates Conference, a move which promoted the conference to widen membership to graduates from the advanced education colleges.

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WAIT Academic Departments

In presenting an historical account of the development of the WAIT academic departments, the present chapter describes the background of tertiary courses emerging at the Perth Technical College prior to 1965, when relocation of programmes to the Bentley campus began. This transfer was accompanied by important shifts in the purpose, structure and staffing of courses to bring them into conformity with national policies and the mission of the institute. Within the context of the national binary policy, WAIT found plenty of room to experiment and to grow very quickly until 1975.

Perth Technical College

By 1965 the Perth Technical College offered thirty-one associateship courses and a similar number of diploma courses.¹ After 1952, academic criteria for these courses were specified in more detail in order to rationalise entry and content standards across the different discipline areas. This measure also helped to define course levels more clearly for the relevant professional societies.

Perth Technical College enrolments by 1965 totalled 1,947 students in associateship courses and 6,118 in certificate and diploma courses. Enrolments had doubled between 1959 and 1961, and again between 1961 and 1965. Williams, as director of technical education for much of the period, drew upon this growth in persuading Director-General of Education Robertson to abandon the idea of a special arrangement with UWA. In Williams' view the case for a new and separate tertiary institution was more than justified.

The nucleus of this new institution was engineering, which had started from the associateship courses introduced by Phillips and Hayman between 1944 and 1945. There was only one department; it was not split into separate departments until WAIT came into existence. By 1965 engineering was

available in seven specialisations: civil, communications, highway, electrical, electronic, mechanical and production. Electronic and communication engineering had emerged from certificate and diploma programmes for technicians in fields experiencing revolutionary development in post-war decades. Production engineering started in 1961 in response to direct requests from Chamberlain Industries Ltd. Highway engineering also commenced in 1961 to serve the needs of the Main Roads Department and local government.

The Department of Engineering had grown from a base of diploma programmes under first, Hayman and later, Erich Walter Shilbury, who became head in 1946. Shilbury, a refugee from Nazi Germany, had arrived in Perth during 1935 after a distinguished career as a structural engineer in Berlin. A graduate of the Berlin Technical University in the 1920s (where he attended lectures by the young Albert Einstein), he had prospered until his firm was sent into bankruptcy because he was a Jew. In Perth he taught at Wesley College for a short period before joining the Perth Technical College in 1946.² An élite engineer by any standard, Shilbury achieved a great deal in appalling conditions at the college to prepare the way for its transformation into the Institute of Technology.

Surveying and cartography, like many other college programmes, grew in response to insistent community demand. This was accelerated by the failure of the State's surveyors to sustain a university degree course, which demanded standards well beyond the requirements of the Land Surveyors' Licensing Board. In 1962 the college responded by introducing an associateship course modelled on a similar programme at RMIT.

(Architecture at the Perth Technical College began in 1946 under the leadership of W. H. ('Robbie') Robertson, a much-travelled graduate of the University of Melbourne who settled in Perth during the 1930s. He worked with the Commonwealth Department of the Interior before taking up his post as head of architecture in 1946. Robertson died in 1952 and was succeeded by F. S. Bolland. Under Bolland a new course was introduced to satisfy rising standards demanded by the Royal Australian Institute of Architects, which at the time was working closely with UWA towards the establishment of a degree course. Arnold L. R. Camerer, who had qualified through institute examinations and worked with Robertson in the Department of the Interior during the war years before joining the college department as a lecturer in 1947, was head of department at the time WAIT opened its doors.

In spite of poor accommodation at St George's Terrace, the Architecture Department built up enrolments in the associateship course to a total of 198 in 1965. Associateship courses in quantity surveying and in town and regional planning also came into existence during the 1950s, supported on a base of diploma studies for architectural draftsmen and builders.

Amongst the college's professional courses, pharmacy had the longest pedigree, going back to the appointment of Edward Mayhew as its first pharmacy teacher in 1900. Mayhew had been foundation president of the

Pharmaceutical Council of Western Australia and promoted close co-operation with this organisation. When Mayhew retired in 1933, his work was continued by a lecturer, Dr Eric M. Watson, who had recently completed a PhD at the Imperial College, London. Watson became head of department in 1954 and retired in 1964 after having been heavily involved, in association with Senior Lecturer N. B. (Neil) Snell, in the design of chemistry facilities at Bentley.

Pharmacy at the college went through a difficult period in the 1950s, when the dated apprenticeship system attracted much criticism. Hayman even threatened to discontinue the course unless the Pharmaceutical Council of Western Australia agreed not only to upgrade its requirements to associateship level but also to recognise the college course as meeting its examination requirements. The council, rebuffed by UWA when it asked in 1960 for the introduction of a degree course, eventually agreed to these terms. Watson, collaborating closely with the council, quickly introduced an associateship course to meet the requirements of professional bodies in Great Britain and other Australian States, which had threatened to withdraw their recognition of the former college course.

Applied and pure chemistry courses, like pharmacy, dated from the early years of Perth Technical College operations. A service subject for professional courses in metallurgy, mining and engineering, chemistry also served the training needs of registered public analysts and industrial chemists. During the 1920s Phillips ensured that the chemistry diploma course qualified graduates for membership of the new Royal Australian Chemical Institute. Chemistry classes also were organised for part-time students seeking to pass university units. In 1965 there were nearly 100 enrolments in the chemistry associateship courses.

The training of medical laboratory technologists at the Perth Technical College started after World War II, when hospital laboratory services dramatically expanded. Services grew by a factor of ten between 1958 and 1962, leading the State Department of Public Health to establish training courses at the college for its own cadets. In 1962 the college co-operated closely with the Department of Public Health and the local branch of the Society of Laboratory Technicians to replace the former diploma programme with an associateship course, and this became a full-time course in 1967 after WAIT opened.

Mathematics and physics were other fields dating from the college's earliest days, though mostly to service the needs of other professional courses. John Bernard Allen, a student of Professor William H. Bragg at the University of Adelaide, started the first physics laboratory in Western Australia, using apparatus left behind in 1904 by Professor Frederick Soddy after the latter's spectacularly successful public lectures and demonstrations in Perth, Fremantle and Kalgoorlie. Allen also engineered recognition of the college as an affiliated institution for the award of Adelaide's science degree. This affiliation arrangement passed over to UWA after 1913, enabling students to study part-time towards the university's science degree. Ray Davis was a

lecturer in the department from 1920 till 1942, when he became the first principal of the Perth Technical College.

Under the headship of Fred W. Faulkner (1950–65), diploma and associateship courses in applied science were introduced to prepare students for secondary school teaching. Director-General of Education Robertson and Hayman collaborated closely in this, because of the desperate shortage of science teachers in the schools and the heavy failure rate among science teacher trainees attending UWA. Associateship courses in applied science and mathematics started in 1962, and by 1965 enrolment of eighty-four diploma and 142 associateship students served as a significant contribution to the State's teaching service.

Commerce and management emerged as very large departments at the Perth Technical College during the 1950s and 1960s. In accounting there were 4,000 diploma students in 1965, and 180 enrolled for the associateship in commerce. By the early 1950s the various accounting societies had amalgamated to form the Australian Society of Accountants and recognised the college diploma courses as meeting particular examination requirements. The process of lifting qualification levels was already well advanced by the mid-1960s, and the associateship in commerce with an accounting major was to become a significant feature of WAIT's operations after 1967.

The Perth Technical College's success with accounting owed much to the leadership of Leslie James Hollis, whom Phillips recruited as commercial master in 1946. Hollis built up the tertiary accounting and commerce work from a base of secretarial studies until 1955 when he was appointed deputy principal. Hollis later became principal of the college (in 1961), but retired early in 1966 to join the newly established Faculty of Commerce at UWA. Cecil Emil Carr, who joined the college in 1950 having completed a diploma in management from the Royal Melbourne Technical College after a career as an analytical chemist, introduced associateship programmes in management accounting (1956), public administration (1960) and production management. Throughout this period Carr worked alongside Dr Norman Francis Dufty and the two established an extremely entrepreneurial department, with Dufty succeeding Carr as head of department in 1957, when the former abandoned the field of metallurgy.

Art studies at the Perth Technical College dated from 1900 and achieved some prominence under the guidance of Robert Linton, one of the State's first professional artists. This work declined somewhat during the 1930s after Linton's retirement and under Depression constraints, but expanded again after the war under the leadership of Percy I. Hunt. He was joined in 1955 by A. K. (Tony) Russell, who was a young English design specialist. The college department quickly gathered strength, based on the training of art teachers, commercial artists and adults pursuing personal interests. Diploma courses in fine art and in design followed in the early 1960s. Student demand mounted to such a point that in 1965 the college introduced an associateship course in art teaching, and laid plans for similar level courses in fine art and design. In the Perth Technical College, art suffered severely from the totally inadequate

accommodation available, first at St George's Terrace and again, at the James Street annex, to which it was moved in 1961.

A Perth Technical College Department of General Studies came into existence in 1964, just before the first WAIT buildings opened at Bentley. It started from service courses in English, psychology, administration and other professional programmes, which during the 1960s expanded to include a course in social science for trainee teachers. Robertson was involved in this initiative, which was intended to increase the flow of qualified teachers into the secondary schools. Heavy failure rates among teacher trainees in the social sciences at UWA, and the university's increasingly restrictive policies towards external students added to demand for the new course. Associateship enrolments reached 229 by 1965. (For qualified teachers the Department of Management in 1964 introduced a diploma course in educational administration.) General studies offerings extended also to psychology, with a bias towards the needs of industry and, later, of welfare service agencies. In other developments the college in 1965 introduced courses in Asian languages, mainly for school teachers, and also began planning initiatives in the field of library studies.

Home economics was a special case. Work in this field started in 1940 with the appointment of Elsa D. Gerrand as head of a Department of Domestic Science.³ The intention was to counteract the high levels of female unemployment experienced during the Depression years, through the training of domestic workers. After the war the focus shifted towards the training of domestic science (later home economics) teachers. Then in 1951, in co-operation with the School of Dietetics at the Royal Perth Hospital, the college introduced an associateship course in home economics. This enabled students, mainly young women not holding a relevant university degree, to qualify as hospital dietitians. Faith Missingham replaced Gerrand in 1953 and she, in turn, was replaced as head in the early 1960s by E. J. (Jean) Callander. In 1965 there were twenty-one students in the associateship and eighty-eight enrolled in certificate and diploma courses in home science. All but a few trainee dietitians were trainee teachers.

Establishment of WAIT Academic Departments*

Applied sciences

Under Dr Ronald (Alan) Coombe the Division of Applied Science had been established with departments in physics, chemistry, pharmacy and mathematics.⁴ By 1972 these had expanded into departments of physics, chemistry, pharmacy, mathematics, medical laboratory technology (1970), computing and data processing (1971) and biology (1973). Applied science staff came largely out of the Perth Technical College, although positions of head of department and senior lecturer were advertised.⁵

* Academic staff at WAIT in 1968 are listed in Appendix 2.

Accommodation for the applied sciences started with the original chemistry and mathematics–physics buildings opened in 1965, although additions were added in 1968 to house facilities for chemistry and pharmacy, catering for growth. The biological sciences and medical laboratory technology gained a new building in 1970, and a new animal house for biology also was added at the time. Computing and information studies were housed in their own building in 1971, and in 1972 extensions were added to mathematics and physics.*

TABLE 5.1 Courses offered at WAIT, 1969

Associateships		
Accounting	Commerce	Home economics
Administration	Design	Industrial arts
Applied geology	Engineering:	Mathematics
Applied linguistics	Civil	Medical lab. technology
Applied physics	Communications	Metallurgy
Architecture	Electrical	Nutrition
Art	Electronic	Pharmacy
Art teaching	Highway	Social science
Asian studies	Mechanical	Social work
Chemistry:	Production	Surveying
Applied	Fine art	Town & regnl planning
Analytical	Geophysics	
Post-Graduate Diplomas		
Administration		
Applied physics		
Educational administration		
Diplomas		
Applied linguistics		
Home economics		
Quantity surveying		
Social science		
Others		
Chartered Institute of Secretaries		
Institute of Chartered Accountants		
Fellowship diploma of the Pharmaceutical Council of Western Australia		

Source: WAIT, *Handbook 1969*, p. 12.

The new departments added to applied sciences—medical laboratory technology (1970) and biology (1973)—were headed by J. M. Foley and Dr Brian Collins respectively. Andrew Graebner, a dental science graduate from UWA, was appointed as senior lecturer in dental therapy in 1971 to establish an associate diploma course in this field.⁶

* See Appendix 3 for schedule of first decade of building contracts at WAIT Bentley campus.

The Chemistry Department, when it transferred from Perth Technical College to the independent WAIT, included four professional (associateship) courses in applied and analytical chemistry, pharmacy, medical technology and geology. These had either been part of the pre- and post-war courses (i.e. chemistry and pharmacy) or had been added as the post-war part-time apprenticeship style of health science courses were moved to a full-time college basis. The specialist chemistry courses were directed at the industrial sector, although a number of graduates went on to take graduate diplomas in education training at Nedlands Secondary Teachers' College.

Within the Department of Chemistry, geology was added as a full-time course to reflect the demands of the mining boom. Indeed the Division of Applied Science urged the establishment of a separate department of geology, but several factors delayed the event, the most important being the collapse of the mineral boom, which savaged enrolments.⁷ Later it was planned to introduce an earth sciences programme in which geology would figure prominently, but this became entangled with developments at the School of Mines (discussed in Chapter 6). The outcome was to delay the introduction of a proposed bachelor of applied science course and a graduate diploma in earth sciences.

In pharmacy the associateship course was substantially remodelled from the previous apprenticeship-style course, although for a time the two ran side by side. The biology associateship was introduced to meet the needs of secondary school teachers, as was the general applied science associateship. The full-time associateship course in medical laboratory technology replaced the previous part-time course run by the Perth Technical College, but involved close co-operation with the State Public Laboratory Services, which employed most of the graduates. The diploma course for dental therapists arose out of State government initiatives to cope with a desperate shortage of dentists. Professional dentists co-operated willingly to accept a subgraduate stratum. In 1973 WAIT was to take over the course completely from the State government, but both the Commonwealth government and State government withdrew from the scheme. WAIT proceeded to offer the course independently, but at a much reduced level of enrolment than originally intended.⁸

The associateship courses in physics, mathematics and applied science were largely intended for secondary school teachers, although a small number of graduates went into industry as applied scientists. In 1967 the Australian Institute of Physics recognised the associateship in applied physics course as equivalent to graduate status. Geophysics was a special case, intended by Dr John de Laeter (with active support from the Wark committee) as a major national initiative in the field.⁹ The more general physics instruction was largely designed to service other professional programmes.

The radiography courses, introduced in 1972, were designed to serve the specific needs of the State hospital system. Environmental science, as a field of interdisciplinary activity within the Division of Applied Science, attracted attention from 1969 with the object of establishing a unit to collect local data.

The concept was widened later, partly in response to developments planned at Murdoch University, to include incorporating environmental science perspectives in all applied physics teaching, promoting public awareness and encouraging appropriate student projects.¹⁰

From the time of their establishment the chemistry and physics departments were active in research, development and consulting work with State government and industry. The chemistry and pharmacy departments took advantage of the sophisticated equipment obtained with their new buildings to undertake projects for local industry. In the Department of Physics de Laeter actively promoted research and development, which after 1970 crystallised around three staff 'groups': geophysics, materials science and applied nuclear physics. Marine science and technology was another field to receive attention after 1968, growing out of de Laeter's interest in developing staff expertise in the area. Under Dr John Penrose marine science research quickly took advantage of Commonwealth government and State government interest in oceanographic and fisheries research.

An impressive variety of research publications and reports was generated by such staff. De Laeter and then others succeeded in attracting prestigious Australian research grants. Dr Brian O'Connor and G. L. Kerrigan in 1973 received a grant from the Australian Institute of Nuclear Science and Engineering for a neutron diffraction study of plastics. Such grants were among the first awarded to staff in Australia's CAEs. Penrose's work in marine science and technology was associated with a unique archaeological study of the wreck of the *Batavia*, a Dutch ship which was part of one of the great sagas of early Australian history.¹¹

Teaching nevertheless remained a high priority in the applied sciences. Students undertook relevant practical projects, many associated with work for industry and government. In other directions the Physics Department experimented with new approaches to teaching, involving large lecture classes complemented by small laboratory and tutorial sessions. Self-paced independent study materials were introduced as well as a unit in the history and philosophy of science. Cumulative assessment and the reorganisation of the academic year were innovations designed to minimise student wastage.

One particularly significant event was WAIT's hosting in 1972 of a conference on the teaching of physics in CAEs, which was attended by nineteen delegates from fifteen colleges in other States.¹² The Department of Physics also arranged short courses for science teachers and for industry and government professionals, as well as hosting a string of visiting scientists, for example Professor Ernest Titterton from the Australian National University, and Professor P. Fisher from Purdue University. With students and ex-students, the Physics Department made special efforts to promote collegial activities and obtain feedback on teaching performance.

Mathematics, under Stan T. Waddell, gained most of its staff by invitation from the Perth Technical College. Included among them was Ron Hartley, who would pioneer significant developments in computing at WAIT and win appointment as the first head of the Department of Computing and Data

Processing. Mathematics courses, like those in physics, were designed for secondary teacher trainees and for students in other professional programmes. Only later were staff recruited with industry experience, for example Graeme Hollis in 1973, and Peter Marshall.

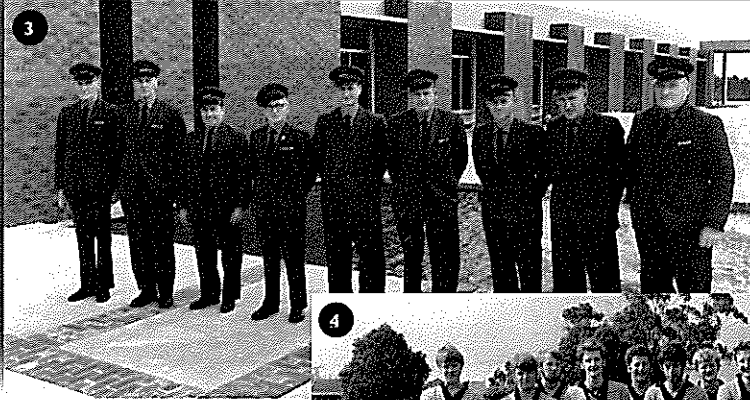
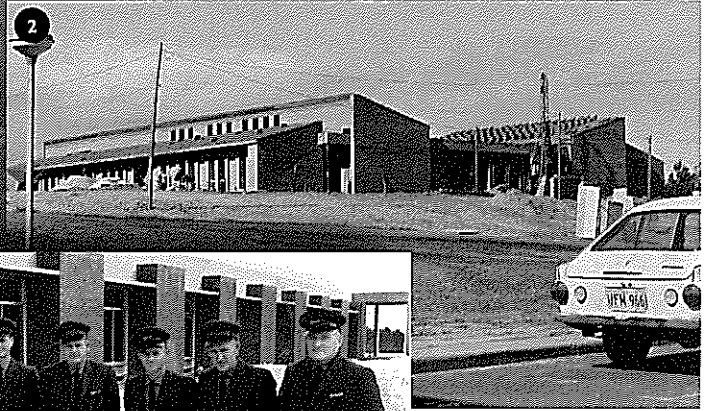
Hartley's work in computing and data processing assumed special significance at WAIT.¹³ He was one of the few qualified computer specialists in Western Australia, having completed UWA's post-graduate diploma course among other studies. A senior lecturer at the Perth Technical College, he had forged links with the infant computing profession in Perth and provided reports on the selection of a computer system for the college.

At WAIT Hartley worked overtime introducing computing to academic staff from all departments, especially engineering and business, and was executive officer to the institute's computer advisory committee, which selected an ICL 1902A computer. This arrived at WAIT in 1971. Sir Ian Wark opened the computer building on 29 November 1971. The associateship course in information processing commenced in 1970 with sixty-five students—forty-two of them part-time and representing a large proportion of the data processing workers in Perth. A more technical associateship course in computing was offered in 1972.

WAIT's Department of Computing and Data Processing trained the majority of Western Australia's computer professionals, with the first enrolments from mature-age people in engineering, science, government and industry who were themselves pioneers in computing. They were to occupy leading positions in business and teaching, including at WAIT itself, in the TAFE system and at the Western Australian College of Advanced Education (WACAE)—now Edith Cowan University.

The department also vigorously promoted short courses among teachers, students and professional bodies, besides engaging in consultancies. The latter were rewarded by major gifts including the main AMDAHL computer processor and memory system worth \$800,000. Hartley's own work on a SODA program for dietary analysis was widely used in Australian hospitals, universities and colleges, and by the New South Wales Department of Health (which donated \$100,000 worth of medical administration software for use among WAIT students). Departmental staff and, especially, Hartley played leading roles within the computing profession both nationally and at the local level. The department also played an especially important role in installing and administering WAIT's data processing systems for accounts, research and planning, examinations, payroll, fee collection and library operations—systems that were in the vanguard of Australian computing. The Australian Computer Society elected Hartley as a Fellow in 1976.

The applied science departments started from an excellent equipment base provided under the interim grant. Later, however, the situation deteriorated under Commonwealth policy to curtail spending in CAEs on items associated with research. A fire in a fume cupboard in 1971 also seriously damaged the MS12 mass spectrometer. As a result of the tight financial situation, the



1 Ron Hartley, inaugural head of the Department of Computing and Data Processing which was established in 1969.

2 Computing and data processing building under construction, June 1971.

3 WATT grounds staff lined up in their new uniforms, July 1968. *Left to right:* Ken Finlay, Bill Burrows, Bill Buckingham, Peter Healy, Eric Pallier, Sid Thompson, Dave Edwards, Fred Hollier, Joe Palmer.

4 WATT Rugby Club, 1970.

Chemistry Department forewent major expenditure in 1970 so that in the following year it could obtain a Perkin-Elmer model R20B magnetic resonance spectrometer. This was planned for industrial consulting uses in determining the molecular structure of organic chemical compounds.

The applied science departments nevertheless were in the forefront of WAIT's conversion of associateship courses to accredited degree programmes, while graduate diploma courses also emerged, serving as preliminary ventures towards the introduction of master of applied science courses. Bachelor degree courses included chemistry, pharmacy, applied physics, geophysics (in 1972), biology and information processing (1973), mathematics (1974) and medical laboratory technology (1975). Graduate diploma courses included chemistry, pharmacy and computing in 1973—all seen as preliminary ventures leading to a master of applied science degree programme at a later date.

Engineering

The three engineering departments: civil, electrical and mechanical, formed the largest part of the Division of Architecture, Art and Engineering, under the leadership of Dr A. H. (Harry) Nash. Surveying became a separate department in 1969. The first staff were appointed on invitation from the Perth Technical College, with only a few recruited from outside.

As chemistry, physics and mathematics moved out of the Perth Technical College, engineering and architecture spread into the space left behind. Indeed the engineering departments remained on the old Perth Technical College site until 1972, the WAIT signs on notice-boards being the only visible evidence of the change in status. This sense of separation from the rest of WAIT compounded resentments about institute-wide policies regarding staff establishments, class sizes, funding and academic governance, since the engineering departments (with some justification) regarded themselves as the heart of the new institute.¹⁴

To make matters worse, engineering courses went through a difficult period of transformation between 1967 and 1973. Although the associateship courses were all redrafted in 1967 and 1968, they faced critical examination by the Institution of Engineers (Australia) in 1969, and again in the early 1970s when it shifted to a four-year model. The WAIT associateship, however, in line with CACAE policies, was a three-year course. This occasioned bitter wrangles between central administration and the engineering departments, which largely supported the profession's policies. In 1972 the Institution of Engineers (Australia) withdrew recognition of the WAIT courses, a decision overturned in 1974–5 when the courses were resubmitted as four-year degree programmes. The physical transfer to new buildings at Bentley at this time also removed the institution's reservations about the standard of WAIT's facilities and equipment.

Engineering student enrolments in the meantime rose steadily from 1967 but levelled off in 1971. Uncertainties about professional recognition were a significant factor in this. At any rate, staff and student dissatisfaction with the

'verminous' accommodation at the Perth Technical College ran high, and departmental reports from this period appear as a litany of complaint and dissatisfaction. Staff rejected as inappropriate many general WAIT academic policies including funding and staff establishment formulae which caused the Department of Civil Engineering to be classified as a 'small department'. Engineering, moreover, tended to retain longer than most the technical education 'culture' that WAIT was attempting to rectify. There was little evidence of the excitement experienced in the applied sciences and many other departments.

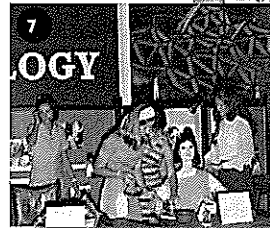
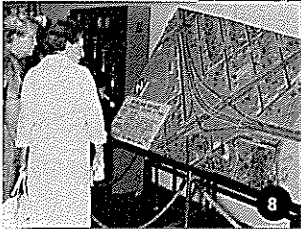
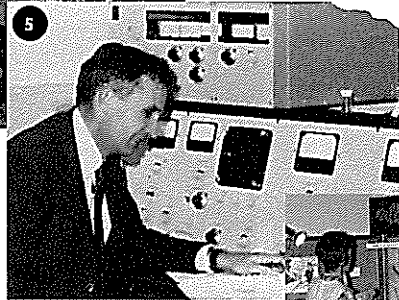
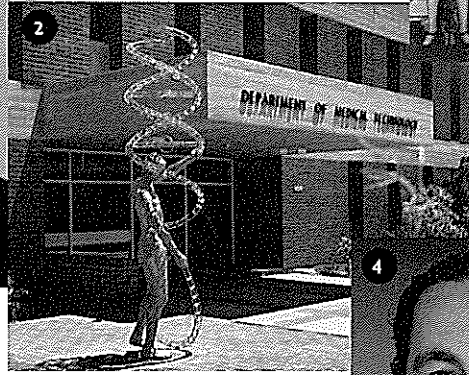
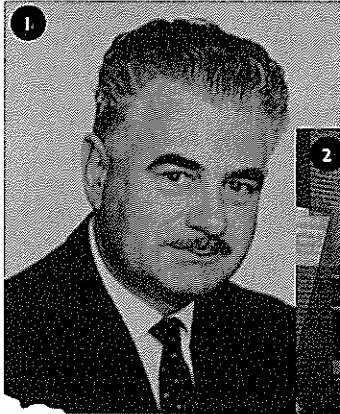
Resolution of these difficulties awaited completion of the engineering complex at Bentley, on which construction at last started in 1972. Even so, staff resentments reached a point in 1972 that the State government agreed to assist the removal of non-laboratory instruction to transportables at Bentley. This only further complicated teaching problems, since instruction materials needed to be shipped back and forth as needed. Under the circumstances, the staff worked diligently over the design of the Bentley complex, which was based on the best available models and capable of future expansion. The engineering complex was opened in November 1974.

Surveying, established as a separate department in 1969 with Dr L. A. White as head, shifted from St George's Terrace to temporary quarters at Bentley in 1972.¹⁵ The associateship course nevertheless attracted a healthy enrolment, which rose from forty-two in 1967 to a peak of 205 in 1974. It was redrafted and accredited as a bachelor of applied science degree in 1972, while a graduate diploma course was introduced in 1973.

As a result of falling student interest, the associateship course in production engineering had to be terminated, while courses in metallurgy encountered difficulties when the School of Mines was incorporated into WAIT. Following a State inquiry, the engineering chemistry associateship was replaced by a graduate diploma programme in 1971, but it attracted students for only a short period.¹⁶ The courses in mechanical engineering meanwhile experienced special difficulties in gaining recognition from the Institution of Engineers (Australia).

All the engineering departments were affected by high student attrition with graduation rates as low as thirty per cent. Head of Mechanical Engineering Munro attributed this to the WAIT entry level of only 270 points in the Tertiary Admissions Examination in contrast with UWA's 300 level. Nash's study of electrical engineering students also revealed that WAIT's more flexible entry standards created difficulties. All the departments experimented with cumulative assessment and the semester system as a means of overcoming student attrition, and they were all conscious of improving teaching techniques.

The engineering departments, perhaps because of their isolation from developments on the Bentley campus, were not heavily involved in research, development or consulting work. There were important exceptions, however, especially in mechanical engineering. Work was carried out on atmospheric pollution from the Kwinana Power Station; on pulsating combustion systems,



1 I. J. M. Foley joined WAIT in 1970 as head of medical technology.

2 Andrew Hickson's DNA sculpture at the entrance to the newly opened medical technology building, 1973.

3, 6, 7 & 8 WAIT was a major exhibitor during the 75th anniversary celebrations for Boans retail store in Perth in March 1971, publicising its courses through diverse promotional displays.

4 Dr Brian Collins was promoted in 1974 to head the new Department of Biology.

5 Head of physics Dr John de Laeter with a new mass spectrometer bought in 1972 to replace one damaged in a fire the previous year.

9 Physics Senior Lecturer Dr John Penrose led members of WAIT's Marine Studies Group to the Abrolhos islands in 1974 to assist WA Maritime Museum archaeologists with the excavation of the 17th century Dutch wreck *Batavia*.

Left to right: Penrose, WAIT student and secretary of the WAIT Diving Club Peter Locke, volunteer Mike Staines, head of maritime archaeology Jeremy Green (obscured), museum officer James Stewart.



1 Ernie Walter Skilbury, head of the Department of Engineering at the Perth Technical College (1946-64), laid the foundations for the engineering and surveying departments of WAIT. The E. W. Skilbury Lecture Theatre in the new general facilities building were named after him.

2 "Transitions", a pine and bronze sculpture by Tasmanian artist Stephen Walker, was one of WAIT's early major art commissions. It took almost three years to complete.

3 Artist Stephen Walker (right) talking with Art Lecturer Hugh Child (centre) and Ms Child at the unveiling of "Transitions" in the new engineering building on 10 October 1975.

4 Completion of the new five-level general facilities building enabled at least part of the School of Engineering and Surveying to move to the Bentley campus in 1974.

5 Commonwealth Minister for Education K. E. (Kim) Beazley (Sen.) opened the new general facilities building on 8 November 1974.

in conjunction with the University of Bradford in England; and on experiments with gas-fuelled combustion engines, started in 1970 with support from Wesfarmers Kleenheat Gas Pty Ltd and General Motors-Holden Pty Ltd.

Architecture

The Department of Architecture at WAIT took over and revised the associateship courses conducted at the Perth Technical College, while the diploma and certificate programmes remained with the Technical Education Division. The associateship courses (in architecture, town planning and quantity surveying) received approval by the professional bodies concerned in 1971. In the same year the department moved into its own building at Bentley. Architecture benefited from the recruitment of staff from overseas to mix with those from the Perth Technical College. The WAIT department retained close relationships with the new department being established at UWA, in which several WAIT staff enrolled for masters degrees.

Over the next few years the architectural profession itself wrestled with various reforms, none of which received unanimous support. In any event, the UWA course tended to emphasise an academic approach with a focus on research, whereas the WAIT course concentrated on a scientific approach to the application of architectonics in the profession. This conformed to the usual division of function between university and advanced education, though the differences were sometimes more apparent than real.

Establishment of the UWA programme nevertheless caused WAIT enrolments in architecture to slow in 1970 for the first time. UWA began to absorb about twenty-five per cent of architecture students in the State, and about fifteen WAIT students transferred there under advanced standing agreements. Enrolments may also have been affected by mixed loyalties within the local profession, which had strongly supported the university course. Accommodation, first at the old Perth Technical College and later in a very controversial new building at Bentley, also seemed to be a factor. During 1971 the department took stock of its problems, including high failure rates in the first year, and examined possibilities for broadening into town and regional planning, building and quantity surveying and consulting work.¹⁷ With head of architecture Camerer due to retire in 1975, the department also faced the need to recruit a successor and prepare courses for accreditation as degrees under the new advanced education arrangements.

Accounting, business studies and administration

The most spectacular growth at WAIT in the first years occurred in the Division of Commerce and General Studies. Commerce was divided into two departments: accounting and business studies; and administrative studies (renamed 'management' in 1971). Enrolments, especially of part-time students, were initially boosted by students rushing to complete courses before the introduction of new requirements by the Australian Association of Accountants

in 1967. These included three years of post-matriculation study and so dovetailed closely with WAIT's three-year associateship pattern.

The first staff in accounting and business studies, and in administrative studies, were invited to join from the Perth Technical College. Neither department anticipated the insatiable demand for business places that arose during the next few years, when for every graduate there were several jobs on offer. In accounting the mining-related economic boom certainly strengthened this demand, which continued into the recession of the 1970s. Strict quotas in the new Department of Commerce at UWA were also important, particularly in attracting to WAIT part-time and external students. It was clear by the early 1970s that relief would come only from other institutions. WAIT therefore actively encouraged the development of business courses at the Churchlands CAE. As it was, enrolments in accounting and business studies in 1973 stood at 2,884 (compared with 820 in 1969), with 6,000 forecast by 1980.¹⁸

Meanwhile WAIT continued to provide courses tailored to the needs of various professional groups. The department co-operated with the Institute of Chartered Accountants in providing full-time, part-time, external and day-release classes. From 1970 it also provided 'senior' associateship and, later, graduate diploma courses in such specialist areas as data processing, public and government accounting. With support from the Chartered Institute of Secretaries, in 1970 the department introduced an associateship course in secretarial and administrative practice. An associate diploma course in valuation, also launched in 1970, was the outcome of co-operation from the Valuer-General's Department and a newly formed State Taxation Department, both desperate for qualified staff. Firms even sent employees to WAIT on a day-release basis to obtain necessary qualifications. The Department of Accounting and Business Studies also ran short courses on demand from professional groups and engaged in commercial consulting work, while most staff played significant roles in their professional societies.

Carr's Department of Administrative Studies experienced a similar boom in enrolment after 1968, when it became the first non-science department located at Bentley.¹⁹ At the time, the Public Service Commission in Western Australia introduced day-release training to encourage employees to obtain administrative and management skills. Between 1967 and 1972, enrolment in administration courses went from twenty-three to 645, the majority studying part-time or externally. Educational administration, offered at the graduate diploma and subgraduate diploma levels, also commanded a very healthy enrolment (and not only from Western Australia—WAIT was an Australian leader in this field before other institutions became involved).

Inevitably such phenomenal growth exerted enormous pressures on staffing, course development, internal organisation and administration, and accommodation. From a small start in 1967 the Department of Accounting and Business Studies in 1973 employed fifty academic staff organised into five 'domains', some of which were larger than small departments elsewhere at WAIT. Serious accommodation problems were unavoidable at James Street, causing friction

between WAIT and Perth Technical College staff. At the same time, the departmental head, Sears, pursued a vigorous policy of teacher improvement and student evaluation, aimed at reducing the high failure and drop-out rates at WAIT. A predominance of part-time and external students was partly to blame, although the department paid close attention to teaching strategies, student motivation, cumulative assessment and the advantages for students of introducing the semester system.

For business and administration, as in engineering, the solution partly lay in obtaining decent accommodation at Bentley. This started in 1972, when accounting and business joined general studies in stage 1 of the commerce and social science building at Bentley. They moved into stage 2 in 1975.²⁰

WAIT presented the three-year associateship courses in accounting and management for accreditation as bachelor degree programmes in 1972, but the reviewing panel recommended a combined undergraduate degree with options in accounting, management and secretarial administration. This restructured programme, a bachelor of business course, received approval at the end of the year.

Pressures at WAIT to expand several graduate diploma courses in business into masters degree programmes ran into difficulties from the established universities, where the prevailing view was that advanced education should not intrude into post-graduate studies. Commonwealth policy also opposed such moves in the college sector. At WAIT this opposition caused deferment of a master of administration course proposed by Carr just before he resigned in 1971. The longer term outcome was an invitation extended to Professor J. P. Logan from the University of Arizona, to assist in the preparation of a more detailed masters degree proposal.

Art and general studies

WAIT's early expansion in business and administration was rivalled only by growth in art and design, and the social sciences. By 1971 combined enrolments in the non-science fields comprised half the total WAIT enrolment of 6,308. The Department of Art and Design commenced as part of the Division of Commerce and General Studies, but in 1969 was transferred to the (renamed) Division of Architecture, Art and Engineering. Most of the inaugural staff in the Department of Art and Design were recruited from the Perth Technical College, including the head of department, Russell. As for general studies, the single department started in 1967 eventually was parent to three new departments formed in 1972: English and language studies, social science, and psychology and social work.

Both art and design and general studies initially shared accommodation with Perth Technical College staff and students at the James Street annex, with tensions erupting between the college administration and WAIT staff and students, who did not conform to the regimented culture of technical education.²¹ (Art staff and students, for example, wanted to work during the college vacation periods when the buildings were supposed to be locked.)

There were also conflicts about parking, student behaviour, and use of equipment and supplies. With art and design, the situation became so explosive that the Management Board took emergency action in 1970, moving the department into buildings at Bentley originally intended for maintenance workshops. General studies, which began moving in 1969, eventually found permanent accommodation in the social sciences building, completed in 1972.

Art and design started from a base comprising associateship courses in art teaching, fine art and design, and diploma courses in art teaching. During 1968 a diploma and associateship course in industrial arts (for teachers) and an associateship in art were added. From the outset Russell and his staff envisaged WAIT as providing the State's senior art college, although retaining links with lower level training provided by the Technical Education Division. By 1972 the department had established senior lectureships in five main sections: design, fine art, art education, graphic design and industrial arts.

Enrolments in art and design increased so quickly that student quotas were introduced in 1971, when the total reached 435. Admission standards at the time (300 aggregate points in the Tertiary Admissions Examination compared with the WAIT norm of 270), coupled with a large enrolment of full-time students, ensured very high completion rates. Art and design was further noted for its progressive approach to teaching, which featured early experimentation with the semester system and continuous assessment.

The Department of Art and Design in many ways was the most publicly visible of WAIT's departments and contributed handsomely to the institute's corporate development. This encompassed the WAIT logo and academic gown design, in addition to art exhibitions and displays of institute activities; props and publicity for WAIT's theatre; promotion of institute art acquisitions; and general media coverage for outstanding visitors and public lectures. WAIT's artists—Guy Grey-Smith, Arthur Russell, George Haynes and Ian Wroth among them—actively exhibited their own work.²² Others gained significant public recognition, winning international fellowships and participating in professional associations. Members of the department also were among the first at WAIT to engage in consulting work through WAIT-AID.

Art and design staff nevertheless felt keenly disadvantaged compared with those in the 'hard' sciences, who no doubt experienced difficulty working alongside these sometimes eccentric specialists with entirely different perspectives from their own. Transferring art and design to the Division of Architecture and Engineering in 1969 indeed induced at least one fine art staff member to resign in protest.²³ From the perspective of a design specialist, Russell saw the linkage as promoting valuable interdisciplinary developments, and the success of both staff and students was an important factor in community acceptance of the new Institute of Technology.

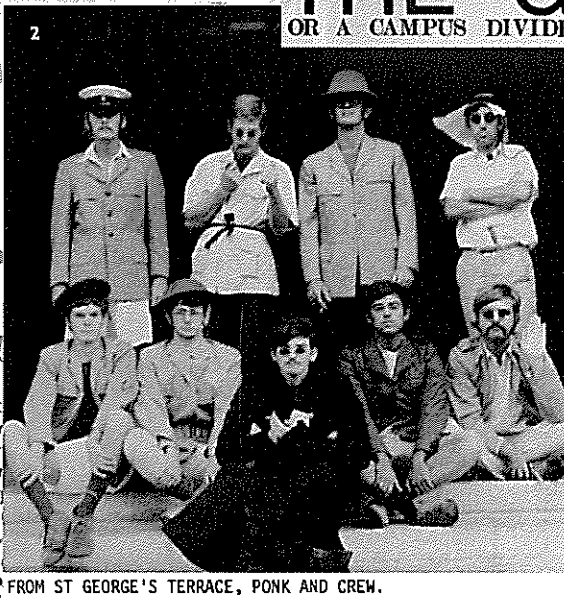
Owing to the enrolment pressures, staff placed a high priority on planning for a new building, scheduled to start construction in the 1973/75 triennium. Meanwhile staff adapted well to the refurbished maintenance workshops which, despite their unprepossessing appearance, were considered to fit appropriately into the work of industrial design.²⁴



FROM JAMES STREET, STRIMOLINGHAM-PURE AND LOT

THE GREAT TREK

OR A CAMPUS DIVIDED IN 3, AND A CITY JUST DIVIDED



2

FROM ST GEORGE'S TERRACE, PONK AND CREW.

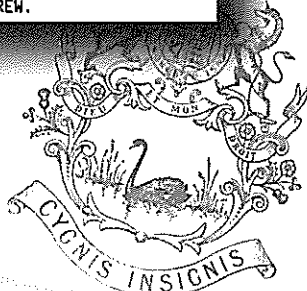


AT TRE

AND A CITY JUST DI

for the use of tired citizens accepted a fiery draught and weatherbeaten fellow the seat next to me. God bless the colony, he said. God bless her, I rejoined.

Soon a great multitude of people into the square such a throng, as I have only seen at folk I own concerts or Bones at. Shaking the dirt of their shivers, they proceeded to sit upon the post office. Having been some while, carousing with my acquaintance, and freely partaking from his brown screw top bottle, I turned to him and put the question, why? Whither, he corrected and rejoined, to my amazement, and indignation, that far from being the quiet edification, that far from being the quiet waiting for a pageant, a spectacular and imposing and exciting national and other great...



1 & 2 WAIT students lampooned WAIT disunity, singling it out as a major issue in the first edition of the student newspaper *Aspect*, 14 April 1969. Background: Page 7 of *Aspect*, 14 April 1969.

The Department of General Studies initiated a number of academic programmes in the humanities and social sciences that opened avenues to professional training previously lacking in Western Australia. They also presented alternatives to traditional degree courses, some of which reflected a degree of complacency in the universities. Many of these WAIT programmes—as with those in art and design—placed the institute at the centre of Western Australia's literary, dramatic and cultural affairs. Enrolments in the social science-related areas, quite small when WAIT opened in 1967, totalled 1,045 in 1972 just before general studies broke up into several new departments. About half the students were enrolled part-time or externally. Staff numbers—eight in 1967—stood at forty-two in 1972.*

The social science associateship course, designed mainly for school teacher trainees, adopted a different approach from traditional university arts degree courses. The purpose, worked out at a seminar comprising teachers, staff and students in 1969, was to provide an interdisciplinary programme featuring a core of sociology with majors in economics, geography, history and psychology, along with electives in other fields. Graduates were accepted by the State Education Department as holding the same academic status as university arts graduates, and they were able to complete professional qualifications at the Secondary Teachers' College, Nedlands. The course, redesigned as a bachelor of arts (social science) degree in 1971–2, received accreditation from the appropriate bodies.

The Department of General Studies promoted new approaches to Asian studies and English. An associate diploma course in applied linguistics and an associateship in Asian studies commenced with instruction in Japanese, Indonesian and Malay, provided at the Perth Technical College. English started from a base of communication and study skills, but quickly blossomed in the 1970s into challenging associateship programmes, meeting the needs not only of school teachers but also of journalists, advertising personnel, radio, television and film producers, actors in the theatre and creative writers. The Australian Journalists' Association, public relations agencies and the Australian Broadcasting Commission were extremely helpful in designing the courses, and supporting graduates. An innovative course in Australian studies, modelled on 'black studies' courses in the United States of America, was initiated by a new head of department, Dr Brian Dibble, a distinguished American poet and linguist.

David Addenbrooke and his father-in-law, Howard William Peters, played particularly important roles in developing the programme for practising actors. Peters, with Williams, saw the theatre as a legitimate concern of an Institute of Technology, which in line with Wark committee policies targeted the skills of acting, production and stage management. It was Addenbrooke who opened the case, eventually accepted, for remodelling Hayman Hall as a drama theatre. He

* Details of overall student enrolments at WAIT by department (1967–70) and by status (1967–71) are shown in Appendix 4, figures A and B.

also persuaded WAIT in 1972 to establish the Western Australian Theatre Company. The company, with Theatregoround (a student company), later launched a host of dramatic productions, from experimental and student works to full professional theatre.²⁵

Art and social sciences staff were further active during the 1970s in a number of ventures that achieved considerable public exposure for the institute. 'WAIT-in-Europe' was a scheme involving international cultural tours, which started in 1973 following informal staff meetings led by Dr Peter Hruby.²⁶ An 'Artist-in-Residence' scheme, also started at the time, brought to WAIT a procession of celebrated artists and writers whose work excited attention in local cultural circles. English language fellowship courses offered under Commonwealth auspices from 1972 were designed for sponsored overseas students, mainly Asians.

Head of general studies Eric D. Atkinson led WAIT into the training of professional social workers. Prior to 1967 he had built up a wealth of experience with State government and voluntary agencies, which opened the way for a social work associateship course under the leadership of Ray Vincent. Introduction of the course created a furore among professional graduates of a newly launched social work degree course at UWA and members of the Australian Association of Social Workers.²⁷ Not only did the latter body refuse to recognise the course, but WAIT students were even barred from obtaining practical experience in many local hospitals. The State welfare agencies, however, welcomed the course as suitable for practical field-workers. The threatened outcome was for a two-tiered profession to emerge, with the UWA graduates occupying the élite level. In 1972, however, problems were resolved when the course, extended to four years, was upgraded to bachelor degree status.

During 1971 WAIT also developed a graduate diploma course in counselling, intended to satisfy a strong demand for practitioners that UWA was unable to meet. In 1973 the Australian Psychological Association agreed to recognise a three-year bachelor degree course coupled to a one-year graduate diploma programme in psychology.

In yet another new development WAIT in 1969 established a Department of Library Studies, under the leadership of John E. Dean. This received support from WAIT Librarian Geoffrey Allen, the State Library Service of Western Australia and the Library Association of Australia. The department introduced a three-year associateship course for undergraduates and also offered a one-year graduate diploma course for graduates in other fields.

WAIT's courses in home economics were other areas to break new ground. Associateship courses were offered to intending school teachers and dietitians. Housed until 1973 at James Street, home economics at first was placed within the Division of Applied Science, but was moved in 1969 to the Division of Commerce and Social Sciences. The head of department, Callander, found it difficult to gain acceptance for home economics in the institute, despite the innovative programme she pioneered.²⁸ The courses were broadened in scope

to encompass home and consumer studies, and indeed Callander and her staff were active in consulting work through WAIT-AID. Yet with the rise of militant feminism during the 1970s, home economics lacked appeal to many young women and girls. The dietitians, for their part, saw themselves belonging to the more prestigious health professions.

TABLE 5.2 Enrolments—by field of study—in approved WAIT courses, 1970–5

Fields of Study	Year					
	1970	1971	1972	1973	1974	1975
Agriculture	46	60	69	58	102	145
Architecture	387	356	382	413	398	368
Commercial & business administration	1628	1942	2479	3186	3186	3144
Engineering						
Civil, elect., mech., mining	858	909	955	945	1029	947
Metallurgy	59	59	78	96	89	79
Surveying	97	112	128	181	198	154
Fine arts (also applied arts, performing arts & media)						
Art & design	362	395	456	432	471	428
English	40	87	159	252	379	388
Home economics						
Home economics only	80	89	115	128	139	152
Nutrition, dietetics	6	16	16	17	25	36
Humanities						
Asian studies	84	72	90	73	99	162
Law	-	-	-	-	-	-
Mathematics & computer science	133	136	168	235	249	230
Medical						
Health sciences	351	375	417	492	611	713
Radiography	-	-	22	45	61	77
Natural & physical science						
Biology, chemistry, physics	380	349	393	390	463	447
Geology	112	131	108	78	63	38
Social & behavioural sciences						
Library studies, psychology, social sciences	326	518	836	1098	1287	1413
Social work	65	69	110	111	151	179
Teacher education (from 1974 included in total)	86	93	114	156	227	520
TOTAL	5014	5675	6981	8230	9227	9620

Source: WAIT, *Statistics '75*, p. 15.

Reorganisation of Divisions into Schools

When Coombe was appointed deputy director in 1969, the position of assistant director (applied science)—renamed dean—went to head of chemistry Dr Marc Liveris. During the 1973 reorganisation, however, health sciences were separated from the original applied science fields which now were formed into a School of Applied Science. De Laeter was appointed dean of the new school and his place in the Department of Physics was taken by Dr Warren Walker.²⁹

The new school embraced the departments of physics, chemistry, biology, agriculture (Muresk), and mathematics and computing studies. (During 1974 a Department of Computing and Quantitative Studies was established in the School of Business and Administration.)

The establishment of WAIT's School of Health Sciences in 1973 represented a significant contribution to Australian tertiary education. Liveris, as dean of applied science, spent a study leave during 1971 visiting a range of North American institutions, where the concept of an integrated school for health-related studies was gaining popularity. At the same time, WAIT was preparing to branch out from the original Department of Therapy into nurse education, speech therapy, dental therapy and even optometry. Medical laboratory technology and pharmacy were already well established. Liveris' idea of health sciences education, however, went further than simply pulling together former 'health auxiliaries'.³⁰ It meant integrating them to emphasise their respective roles within a total health care system; a system based on teamwork but at the same time drawing upon specialist knowledge and skills. For instance, the advent of modern drug therapies had revolutionised the delivery of medical care to involve pharmacists as key members of clinical teams in hospitals. Such teams also included nurses, radiographers, laboratory personnel, physiotherapists and occupational therapists working alongside the more traditional medical practitioners.

Possibilities of introducing nursing courses at WAIT were discussed in the Jackson committee and were also raised very early with the Wark committee in 1967. In the following year the Nurses' Board, the State Department of Public Health and WAIT considered the matter further, with WAIT including nursing in its submission for the 1973/75 triennium. Head of the Department of Therapy Dr A. J. (Jack) Gilbert worked with the Nurses' Board to draw up an appropriate course for implementation as a pilot programme, which might be expanded quickly at a later date.³¹

When the idea was rejected by the Commonwealth, Dr Leslie Le Souef in the Nurses' Board, and Dr D. D. Letham in the Department of Public Health, asked the State government to provide funds for a start in the period 1973-5, pending a takeover of the course by WAIT in 1976. Under-Treasurer Townsing at first rejected the proposals, arguing that WAIT should find the funds; in any case, the Commonwealth was about to take over the funding of higher education. The outcome was for the State government to offer a measure of funding assistance which would be taken up fully by the Commonwealth in

1975.³² Planning by an advisory committee comprising all the major figures in Western Australian nursing commenced immediately.

In other negotiations the College of Nursing in 1973 began reassessing its future in the light of advanced education developments around Australia. Principal of the Western Australian branch of the college, Merle Parkes, approached Williams and the WATEC about incorporating the college into the WAIT Department of Nursing. This received an enthusiastic reception and WAIT absorbed the college's three staff members, while Parkes in November 1974 was appointed head of the Department of Nursing.³³

Speech therapy started at WAIT in 1974 with the appointment of Ann Zubrick as senior lecturer. Discussions about speech therapy dated from the Jackson Report of 1967, after which a State committee was formed to advise on future developments. This canvassed possibilities of absorbing therapy training into the psychology and the education departments at UWA, but eventually turned to WAIT. Speech therapy fell naturally within the ambit of the School of Health Sciences and was placed for administrative purposes with the Department of Therapy at Shenton Park. Zubrick, with assistance from the Educational Development Unit, prepared a bachelor of applied science degree course which opened in 1975 with twenty first-year students.³⁴

The accrediting panel reviewing degree course proposals in accounting and management in 1972 suggested an organisation of business studies which WAIT adopted in 1973. The council appointed as dean of the new school Dr Dolph Warren Zink, a distinguished American academic with an extensive business background. Within the School of Business and Administration were departments of accounting, management and secretarial administration, while a Department of Computing and Quantitative Studies followed in 1974.³⁵ It took a little while to resolve headships of these departments because of rapid staff turnover. Eventually, however, R. R. Winfield accepted the post of head of accounting, with Sears being seconded to the director's office. Professor James P. Logan was initially to succeed Zink as head of management, but when he rejected the post, the headship went to Dr J. G. (Jack) Williams. Val. M. Pervan was the first appointee as head of the Department of Secretarial Administration, although he resigned soon afterwards to become head of a School of Business which was being established at the Churchlands CAE.

The WAIT Council appointed Dufty as the inaugural dean of the School of Social Sciences. At first the school was divided into discrete departments of English and language studies, social sciences, home economics, library studies, and psychology and social work. To head English and language studies, WAIT appointed Dr Brian Dibble. Dean remained head of library studies, and Callander retained the post as head of home economics. Atkinson, former head of the Department of General Studies, became the head of psychology and social work. W. S. (Bill) Cooper served as acting head of the Department of Social Sciences until the appointment in 1975 of Dr F. J. Murray (Jun.), formerly director of the Centre for Asian Studies at UWA.



1 John E. Dean, inaugural head of the Department of Library Studies, 1970.

2 Dr Brian Dibble, a specialist in comparative literature and noted American poet, was appointed to head the Department of English and Language Studies, 1973.

3 & 4 Mexican muralist Andres Sanchez-Flores working on the Mayan mural he painted at WAIT in 1975 during a six-month term as WAIT's first artist-in-residence; the mural, painted on an overpass linking the medical technology and biological sciences buildings, used health and medical themes.

5 Dr L. A. White (*standing*), inaugural head of the Department of Surveying, 1970, with Surveying Lecturer John Szorenyi.

6 Dr Dolph Warren Zink was promoted from head of the Department of Management to inaugural dean of the School of Business and Administration, 1973.

7 Dr Warren Walker succeeded Dr John de Laeter as head of physics, 1974.



1 Minnie Pickett, inaugural head of the Department of Reading, 1974.

WAIT SUPPORTED A LIVELY INDEPENDENT THEATRE COMPANY CALLED 'THEATREGOROUND' AS WELL AS 'THE WESTERN AUSTRALIAN THEATRE COMPANY', FORMED IN 1972 TO STAGE PROFESSIONAL PRODUCTIONS

2 Logo of 'The Western Australian Theatre Company'.

3 In rehearsal for a Theatregoround production of Aristophanes' *Lysistrata*. It was the company's first performance in the amphitheatre, later named the Atkinson Forum in honour of WAIT academic Eric D. Atkinson.

4 A scene from Theatregoround's production of *Lysistrata*, February 1974.

5 The commemorative plaque unveiled at the naming of the Atkinson Forum.

6 David Addenbrooke introduced live theatre to the campus in 1969 with his production of *Look Back in Anger*, and later was instrumental in forming 'The Western Australian Theatre Company'.

Eric D. Atkinson died in 1975 soon after taking up his appointment in psychology and social work. His background and career embodied much that was typical of WAIT's inaugural academic staff. He had worked his way into academe by way of school teaching and professional training and experience in psychology. Pressures of work at WAIT forced him eventually to abandon studies towards a master of education degree which he had started in 1967. Although he lacked the traditional academic achievements, Atkinson put his signature on many developments in the social sciences at WAIT between 1967 and 1975.

It was not until 1974 that arrangements affecting the Division of Architecture, Art and Engineering could be resolved. There had been some tensions in this division between art and design, and engineering, while in architecture, staff professed a greater affinity to the arts and humanities than to the hard technologies. In the event, the School of Engineering and Surveying became a separate entity under Nash as dean, while the departmental headships remained as before.

During 1974 a further rearrangement of departments saw the creation at WAIT of a school entitled The Arts and Design. This combined the Department of Art and Design with the Department of Architecture, while the Department of English and Language Studies moved over from the School of Social Sciences. Dibble became acting dean while the institute considered applications for the position of dean. Russell remained head of art and design. It was not till 1976 that Derek Holroyde joined WAIT as its new dean of the School of The Arts and Design, and Dr Laurie Hegvold took up his post as head of the Department of Architecture.

The 'Arts' part of the School of The Arts and Design was originally intended to accommodate a department of music. The WATEC in 1971 supported WAIT's case for the introduction of executant music courses, scheduled to commence in the 1976/78 triennium. WAIT immediately formed an advisory committee to consider the whole proposal, which envisaged music falling within the broad scope of WAIT's presence in the performing arts and its intended development of a school of teacher education. A board of study was formed and a working party planned the necessary buildings.³⁶ However, the whole matter was referred back to the WATEC when, in 1973, the former teachers' colleges—all involved in music education—were added to the advanced education sector of tertiary education.³⁷ In the meantime, WAIT included a department of music in its submission to the Commonwealth for the triennium 1976/78 and prepared plans for construction of an arts complex at Bentley in which a music department would be housed.³⁸ As it happened, the entire scheme was shelved when Commonwealth funding for higher education suffered dramatic reverses at the end of 1975.

WAIT's involvement in teacher education, as with much else in the 1970s, flowed from recommendations of the Jackson committee in 1967. The committee had suggested not only that the next teachers' college established in the West should be given autonomy and opened as part of WAIT but also that

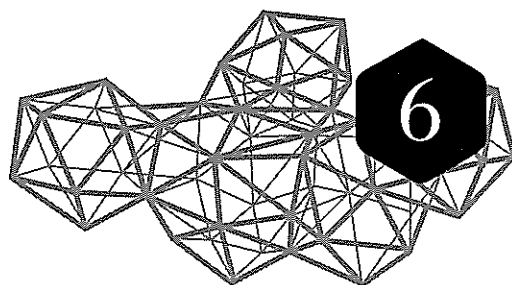
the Kindergarten Teachers' College should contemplate amalgamation with a larger and more comprehensive institution.³⁹ The WATEC, at the request of the Brand Government, took up the matter in a full-scale review of teacher education in Western Australia during 1971. In this review the WAIT plan received endorsement as a means of extending opportunities to students living south of the Swan River.⁴⁰

In the early stages the Teachers' Union and others concerned opposed WAIT's involvement. They perceived the institute as a fairly narrow technological institution, lacking the desirable status for teacher education. By 1971 WAIT's growth and standing had largely undermined this suspicion.⁴¹ In any event, the institute was already heavily involved in teacher training in the applied science and social science associateship courses.

Dr J. G. (Jack) Williams (educational administration) started discussion at WAIT during 1970 with a view to servicing the needs of institute graduates, practising teachers in Catholic and other independent schools, mature-age entrants to teaching and the field of industry training. The Teachers' Union added a bid for the inclusion of training for technical college teachers. In 1971 a board of study was formed to begin the process of planning a WAIT programme to commence during the 1973/75 triennium.⁴²

The teachers' college of the Kindergarten Association of Western Australia was incorporated within the new School of Teacher Education following approaches from the association along lines advocated earlier in the Jackson Report. Dr Leo Foster concluded most of the early planning and negotiation. Kindergarten Teachers' College staff formed the nucleus of the new school: Principal Joan Miles, Jan M. Keeley, Gilbert (Gil) McDonald, Judy Grows, C. B. (Brenda) Jenkins, Roy Reynolds, Joan Pope, Joy H. Robinson and Thelma D. Ure. They were joined in 1975 by Jill Keepes and Dr John Lake (senior lecturers), Patricia Stoddart, Jim Breadmore and Dr Ray Preston (lecturers), and K. Reynolds, Jo Courtney and Audrey Mitchell (seconded from the Education Department). The Kindergarten Teachers' College also provided WAIT's first undergraduate students in the School of Teacher Education.⁴³

Dr Walter Neal accepted the position of inaugural dean.⁴⁴ After a distinguished career with the State Education Department during which he obtained a doctorate from Columbia University in New York, Neal had resigned to follow an academic career in educational administration at the University of Alberta. He was a person who combined an international reputation with practical understanding of the Western Australian environment. Like WAIT Director Williams, Neal had worked very closely with Robertson, in Neal's case in the fields of policy and planning.



WAIT's Branch Institutions

The point was emphasised in Chapter 1 that WAIT was built on the shoulders of tertiary technical education at the Perth Technical College and several other smaller institutions.¹ One of these, the Western Australian School of Mines, had a history as long as the Perth Technical College. The second, the Muresk Agricultural College, dated from 1926. The third and fourth were small colleges training physiotherapists and occupational therapists, started in the 1950s. All were merged with WAIT in 1969 following the Jackson Report, becoming branch institutions in the first instance, but later being reorganised in the light of experience and other circumstances.

Western Australian School of Mines

The School of Mines opened at Coolgardie during 1902 in impressive buildings which had housed a mining industry exhibition. Within two years, however, the school was moved to Kalgoorlie as a consequence of strong lobbying from the mining community, the evident long-term viability of gold-mining in the Kalgoorlie–Boulder area and the collapse of Coolgardie as a town. Housed in premises which, for the time, were attractive and well designed, the school opened at a time when the Eastern Goldfields enjoyed unprecedented prosperity and political influence in Western Australia. It was the object of civic pride and the culmination of several years of political lobbying by mining interests determined to have a training institution dedicated to their needs.

This special status was reflected in government agreement to place the school under the Mines Department rather than have it controlled, as were other technical schools, by the Education Department. The matter had been contentious from the outset, but the special interests involved would countenance no other arrangement. The Mines Department appointed the first director, a New Zealander with extensive training and experience named

Frank Bowen Allen. In 1905 Allen was appointed director of technical education in the State, in a reorganisation that followed the death of Alex Purdie who had inaugurated technical education from within the Education Department. Purdie had opened the Perth Technical School. Under the new arrangement, however, Allen remained responsible to the Mines Department for the detailed administration of the School of Mines, yet responsible to the Education Department for control of technical education generally.

The School of Mines introduced associate diploma courses geared to the needs of professionals in mining engineering, metallurgy and geology, and offered a range of technician and operative level courses and preparatory instruction in mathematics and science. The associate diploma courses were not terminated, as were those at the Perth Technical School, when UWA opened its doors. Indeed an affiliation agreement with the university was concluded to enable students to complete a degree in mining engineering based on study in the two institutions. Only one person ever completed the degree.

After a decade of healthy enrolments, the School of Mines slid from prominence in the wake of a post-World War I decline in gold-mining, which also left most goldfields towns on the verge of collapse. By the end of the 1920s there was every prospect that the school, with less than 100 students, might completely fail. It revived spectacularly during the Depression years, however, when depreciation of the Australian currency, special government bonus payments for gold production, and industry restructuring enabled gold-mines throughout the region to reopen. Throughout the Depression years, the Eastern Goldfields was one of the few prosperous centres in the whole nation.

The school contributed to this revival through proving the worth of new flotation techniques that brought marginal mining works back into operation. The research work involved was centred upon a Metallurgical Laboratory established, on Allen's initiative, by the State government in association with the School of Mines, and won for the school and its staff an enviable reputation with the industry in both Western Australia and other States. Enrolments quickly recovered to exceed 500 in 1939, while the school also opened branches at Wiluna and Norseman and introduced correspondence classes for mining personnel in more isolated places.

Kalgoorlie's revival at the time reopened old arguments about control of the School of Mines, which in 1929 had been placed for administrative purposes under the control of the superintendent of technical education. When Allen retired in 1929, a principal had been appointed to the School of Mines, Bertie Harcourt Moore, who was technically responsible for policy to the new head of technical education, James Francis Lynch. This perceived lowering of status caused such a furore in Kalgoorlie that full control was eventually returned to the Mines Department in 1942, at the time Phillips received promotion to the post of superintendent of technical education.

This occurred during the war years, however, at the very time when gold-mining entered another period of decline, and technical education under

Phillips and his successors (as described in Chapter 1) gained a new lease of life. The School of Mines, isolated within the much larger Mines Department, failed to share in the expansion of technical education after 1945. Associate diploma courses at Kalgoorlie, although remodelled in 1947 to satisfy new professional society requirements, annually attracted enrolments that barely exceeded 100 students. Most of these were in the higher level courses, however, and indeed the majority of associates graduated in the post-war years. Academic staffing was a constant problem because of Kalgoorlie's isolation, while financial neglect led to progressive deterioration of both accommodation and equipment.

The Brand Government, elected in 1959, nevertheless rekindled interest in mining education, led by Court as minister for industrial development, railways and the North-West. This was directly associated with Court's energetic promotion of an iron ore mining boom in the North-West, while the discovery of large nickel deposits at Kambalda also placed Kalgoorlie at the centre of new mining development. A master plan for redevelopment of the Kalgoorlie site followed in 1963, involving additions to the Metallurgical Laboratory and new accommodation for mathematics and physics and, later, mining and metallurgy.

In view of the anticipated costs, the advent of Commonwealth assistance under the interim grant (1965/66) proved welcome in paying for the first section of the mining and metallurgy building. Later submissions to the Wark committee for assistance during the 1967/69 triennium, which were co-ordinated by WAIT Director Williams, totalled \$616,000 for capital and \$600,000 for recurrent expenditure. At the same time, the school completed a major review of its courses that had started about 1961, with assistance from significant mining companies and UWA.² The director of the school, R. A. Hobson, who retired in 1967, shortly afterwards took on the role of promotions officer for the mining industry in a campaign to attract school-leavers into the School of Mines.

The Wark committee, which visited Kalgoorlie in December 1965, supported the School of Mines' submissions and also funded a research project into work-force needs in the State's mining industries. This was very much an act of faith by Wark himself who found the school in a very depressed state during his visit in December. Along with (later Sir) Laurence Brodie-Hall, who was an old acquaintance from his days with the CSIRO, Wark battled hard to convince the CACAE that the school should be kept alive.³ Despite a decline in student numbers in 1965, the School of Mines claimed the support of influential politicians, bureaucrats and mining companies, not to mention a lively local community and press, all of which ensured that the school would not be neglected by the Jackson committee in 1967.

Muresk Agricultural College

The Muresk Agricultural College opened in 1926 during a boom period for agricultural expansion in Western Australia.⁴ Agricultural lobbies were powerful

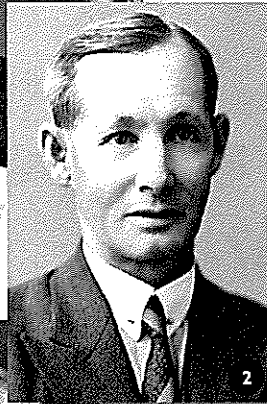
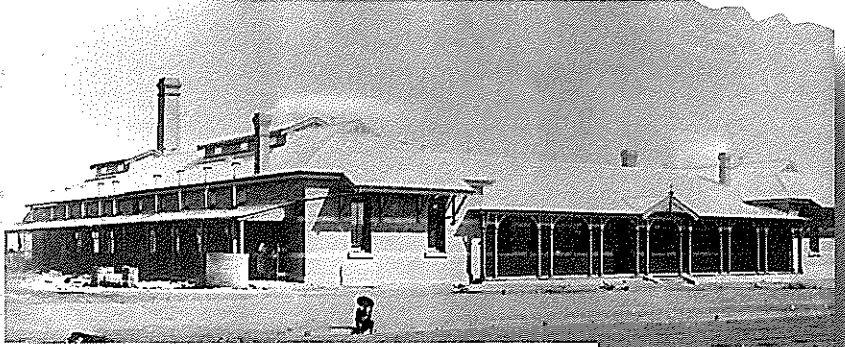
enough at the time to ensure that the college was controlled by the State Department of Agriculture. It therefore developed, as did the School of Mines, outside the regular system of technical education. Situated 106 kilometres east of Perth, just outside Northam, Muresk offered a two-year diploma course for students entering after year 10 of high school. After a short period of healthy development, although enrolments were always small, the college faced hard times during the Depression years when agriculture generally suffered serious setbacks. The college closed for several years during World War II.

Muresk reopened in 1945, offering virtually the same course as in pre-war years, although in 1950 entry levels were raised to year 11 following the Underwood inquiry into agricultural education. The Martin committee was particularly concerned to upgrade agricultural education. However, little was done to upgrade the Muresk course, nor did the college respond positively to its critics in the 1950s and 1960s. Instead Muresk conformed closely to the older models of agricultural education most under attack at the time: it was not adjusting to post-war conditions, to farm management challenges or to new employment opportunities. The college principal, W. Southern, who had been at Muresk since 1939, failed even to respond to widespread discontent among graduates and local agricultural organisations.

Southern's retirement in 1966 coincided with significant reappraisals of tertiary agricultural education, especially its role in the training of technologists, technicians and farm managers, but college staff—largely Muresk graduates themselves—lacked a window to wider academic perspectives and career prospects.⁵ Control by the Department of Agriculture also quarantined the college from wider developments in technical education. Politicians and bureaucrats, on the other hand, responded quickly to the advent of Commonwealth funding for advanced education. To qualify for support, Muresk needed an upgraded course that could be classified as tertiary. This task was a first priority for D. K. (Kevin) Bartels, who succeeded Southern as college principal in 1966. Bartels also recruited new staff from outside Western Australia and commenced planning a new tertiary level, two-year course, aimed at producing farm managers and personnel for agricultural service industries.

Medical Ancillaries

In Western Australia training programmes for medical ancillary personnel began to emerge during the 1950s, most of them provided outside the technical education system. Scientific advances influenced the establishment of medical laboratory and X-ray technology. Poliomyelitis epidemics in the late 1940s spurred the introduction of courses for physiotherapists, while rehabilitation initiatives prompted rapid growth in occupational therapy. The Infectious Diseases Branch of the Royal Perth Hospital became a major rehabilitation centre for paraplegics, under the leadership of surgeon (later Sir) George Bedbrook. Podiatry was another field to emerge. The establishment of Western Australia's first medical school in 1957 served as a stimulus to all the medical professions.⁶



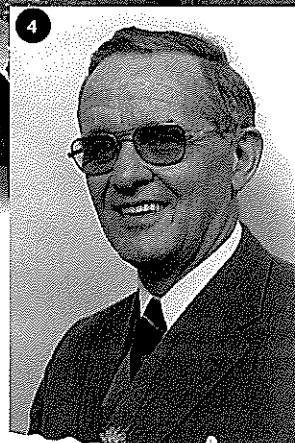
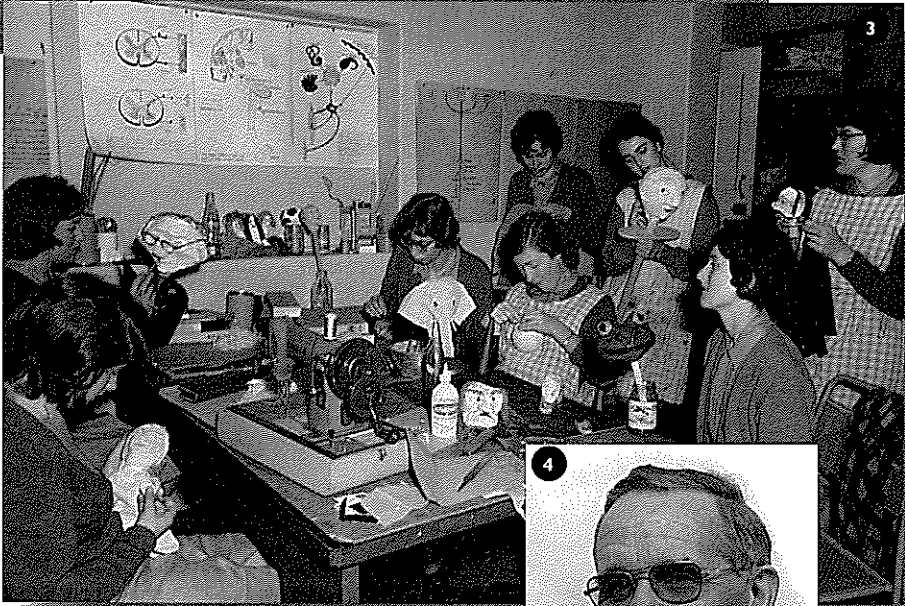
1 The School of Mines building in Kalgoorlie, 1903.

2 Dr Bertie Harcourt Moore took control of the School of Mines in the early 1930s after a controversy over the school's status.

3 Shortly after being appointed inaugural director of the School of Mines, New Zealander Frank Bowen Allen was put in charge of all the State's technical education.

4 Muresk staff in the late 1960s. Principal D. K. (Kevin) Bartels (*front, fourth from left*) has on his right Frank Lambert, the deputy principal.

Background: A. F. (Bert) Wells' drawing of the School of Mines.



1 C. E. Wylie helped to establish occupational therapy as a profession in WA in the 1950s.

2 Transportables housing the paraplegic unit, which moved to Royal Perth Hospital's Shenton Park Annex in the 1960s, included a paraplegic ward (*centre*), swimming pool and gym (*right*) and a basketball field (*foreground*).

3 Occupational therapy students training at Royal Perth Hospital's Shenton Park Annex, 1963.

4 Eminent physician and surgeon Sir George Bedbrook was awarded an honorary doctorate of technology in 1984 for his role in developing the therapies at WAIT and his close association with WAIT's health sciences.

In 1951 the State government passed legislation to establish a Physiotherapists' Registration Board, which opened a School of Physiotherapy within the Royal Perth Hospital. The school in 1953 moved to the Shenton Park annex, where it was located in refurbished huts that had been transported from the goldfields during a typhoid scare in 1906. The school conducted a three-year, full-time diploma course based on British apprenticeship models, combining basic science, anatomy and physiology instruction provided at UWA, with professional instruction at Shenton Park and practical experience in the hospital physiotherapy departments.

The new school experienced considerable difficulties in its formative years. University courses generally proved unsuitable, while, in any event, accommodation became overtaxed once the UWA Medical School commenced operation. Staff also were difficult to retain, since facilities were deficient and salaries uncompetitive. Only with difficulty was the School of Physiotherapy able to retain its recognition by the appropriate authorities in Britain.⁷

Occupational therapy treatment in Western Australia dated from 1949, when very basic facilities were introduced at Royal Perth Hospital. In 1955, however, C. E. Wylie led a small team of occupational therapists to become part of a paraplegic unit established by Bedbrook.⁸ Difficulties in recruiting qualified staff eventually led to the establishment in 1961 of a small School of Occupational Therapy in buildings at Wellington Street (across from the main hospital complex in Perth), under the leadership of Olive Rayne, from Victoria. However, not only was the building scheduled for demolition as part of urban redevelopment, but available space restricted intakes to about eighteen students. As in physiotherapy, staff turnover was high.

The Perth Technical College became involved with the therapies in 1960, when the physiotherapists, occupational therapists and chiropodists asked Hayman, as director of technical education, to introduce classes in appropriate subjects. He quickly seized the opportunity to develop a substantial college presence in the medical ancillaries.

In a separate venture, in 1963, the two registration boards and the Royal Perth Hospital met to consider the establishment of a jointly operated school at Shenton Park.⁹ They submitted a proposal for financial assistance to the Martin committee. Later, heartened by that committee's support for therapy training, they also approached the Wark committee for assistance. Bedbrook threw his support behind this initiative, which sought capital funds of \$500,000 and \$23,000 for recurrent annual expenditure.¹⁰ The Wark committee, although sympathetic, allocated only \$65,000 in the first triennium (1967/69) for planning and design work on the projected school. In frustration the boards and the hospital turned to the State minister for health.¹¹ It was at this point, however, that the situation became the subject of investigation by the Jackson committee.

By this time there were other medical ancillaries demanding attention, including speech therapy, where demands for treatment by 1960 began to outrun the available supply of qualified personnel. At the time, the Department

of Public Health introduced bursaries that enabled selected local students to attend the Victorian School of Speech Therapy in Melbourne.¹²

Nursing education was a special case. During the 1950s, hospital-based diploma programmes were modernised, but insistent demands for higher training standards led the Nurses' Registration Board to introduce further reforms during the 1960s. The Department of Public Health in 1950 introduced bursaries to send qualified nurses to the Australian College of Nursing in Melbourne, which also accepted private fee-paying students.¹³ A local committee of the college, which had begun to run short courses in Perth as a form of continuing education for qualified nurses, in 1966 persuaded the college to open a branch in Perth to conduct a full professional course. The college submitted cases for financial assistance to both the Martin and Wark committees, and then attracted attention from the Jackson committee in 1966 and 1967.

Responses to the Jackson Report

As explained in Chapter 1, the Jackson committee in its final report (1967) carefully considered future arrangements for the School of Mines, Muresk and the medical ancillaries. The major problem was the size and isolation of the small colleges and their submersion within much larger government organisations lacking high priorities in professional education. This left them comparatively weak in comparison with the new Institute of Technology being developed at Bentley. The committee advocated that the Muresk Agricultural College should become a branch of WAIT, and so become separated from the State Department of Agriculture. Proposals for the therapies included their location in a new school at Shenton Park under the administration of WAIT but managed by an advisory committee of relevant authorities. Something similar was suggested for post-graduate nurse training in the Western Australian College of Nursing. A different solution was advocated for the School of Mines which, it was recommended, should become independent of the Mines Department but function as an autonomous college governed by its own council.

Responses to the Jackson Report from within the Department of Agriculture at first opposed a merger with WAIT. The principal at Muresk, Bartels, argued that the new course, which aimed to reform the college programme, had not been given a chance to function under existing arrangements. He also queried why Western Australia should look to amalgamation, when in other States the Commonwealth was prepared to support independent agricultural colleges. Until WAIT had itself become settled and accepted, he also argued, it might be better to leave Muresk with the Department of Agriculture. The minister for agriculture, C. D. Nalder, presented this case to State Cabinet with a plea for increased State funding.¹⁴

The State Department of Public Health proved more receptive to the idea of association with WAIT. The minister, Graham C. MacKinnon, nevertheless

warned that the professionals concerned were apprehensive about losing contact with the hospitals under any new connection with the Institute of Technology, which itself was too new to have much credibility.¹⁵ A complicating factor involved plans to establish the therapies in a Perth Medical Centre at Hollywood.

Regarding the School of Mines, Minister for Mines Arthur Griffith supported the Jackson committee proposals, although preferring the school to remain under the control of the Mines Department. He explained, however, that the school faced a bleak future without improved residential accommodation for students and housing for staff.¹⁶ Brodie-Hall, vice-chairperson of the Chamber of Mines, took a very different view. He argued that the school had no future outside the new Institute of Technology. The Chamber of Mines accepted this view in May 1968 and argued the case widely. Its view was accepted by Wark. Agreement on a merger with WAIT was clinched, after six months of apparently fruitless lobbying, at a dinner in Brodie-Hall's own home attended by Premier Brand, Wark, Jackson, Townsing, Buckett (president of the Chamber of Mines) and Williams.¹⁷

In the meantime, Peters strongly supported the case for amalgamating the small colleges with WAIT. Advantages included: economies of scale; administrative and financial rationalisation; connection to a much stronger institution with a coherent philosophy; staff and student satisfaction; dissemination of new technologies; and simplicity of relationships with the Commonwealth funding authorities. He also believed that operations from within an autonomous institution such as WAIT would be more efficient than from within large government departments.¹⁸

When Townsing presented the State Treasury response to State Cabinet in August 1968, the School of Mines decision was already a *fait accompli*.¹⁹ Financial benefits to the State, as well as the educational arguments, dictated acceptance of merger where the other institutions were concerned. In effect, WAIT at this time became the sort of umbrella institution for advanced education in Western Australia that Robertson had advocated, without success, as being appropriate for UWA. While WAIT indeed favoured the solution, the decision lay with government, which in the case of the School of Mines had been pressed to accept the merger alternative by the main mining interests.

New WAIT Branch Institutions

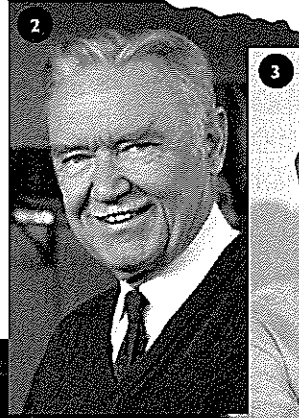
The School of Mines, the Muresk Agricultural College and the therapies schools officially merged with WAIT in 1969.²⁰ In each case the situation was sensitive, with staff apprehensive about their futures and school authorities wary and unreceptive. At the School of Mines, plant and equipment were still antiquated and enrolments so small that WAIT statistician L. M. (Peter) Croy projected that in order to survive, the school would have to broaden its academic base and attract new students by means of new accommodation.²¹ With respect to Muresk, Coombe wrestled with a need to upgrade courses, modernise the curriculum and recruit better qualified academic staff.²²

He encountered special difficulties with the therapy schools because of prior government commitments to the construction of a Perth Medical Centre at the Sir Charles Gairdner Hospital (Hollywood). WAIT's assessment of space needs so shocked the Medical Centre Trust, however, that development at the Shenton Park annex of Royal Perth Hospital was accepted. Negotiations with Royal Perth Hospital proceeded rather more cordially than with the Trust, whose members had been affronted by Coombe's aggressive mien.²³

Even naming and setting objectives for the three branches required diplomacy. The School of Mines became known as 'The Western Australian School of Mines—a Branch of the Western Australian Institute of Technology'; while Muresk became 'The Muresk Agricultural College—a Department of the Western Australian Institute of Technology'.²⁴ A Department of Therapy was created out of the two former therapy schools. Muresk (effectively WAIT's department of agriculture) and the Department of Therapy were placed within the Division of Applied Science. Locating the School of Mines in WAIT's organisation was more difficult. Coombe concluded it would have to function separately, with departmental heads reporting through the principal to the director. Existing advisory committees in the three institutions, reorganised to conform to WAIT guidelines, were retained as important links to industry and the professions.

Selecting heads for the three branches presented still further difficulties, since none of the existing staff possessed the specialist qualifications desired by WAIT. Dr Alwyne Vernon Pegler was selected as principal of the School of Mines; acting director, J. D. Collister, was appointed as head of the Department of Applied Science and General Studies.²⁵ The appointment of New Zealander Dr Clyde A. Smith as principal of Muresk caused some resentment, since Bartels had held office for only a few years.²⁶ Finding it impossible to recruit a qualified professional to head the department of therapies, the WAIT Council appointed Dr A. J. (Jack) Gilbert, then a senior lecturer in psychology in the Department of General Studies. A former tradesman, distinguished war time pilot, manual arts teacher and professional psychologist, Gilbert played a crucial role in co-ordinating and integrating the new school in the WAIT academic system.²⁷ Though the therapies staff were initially apprehensive about his appointment, they later accepted his effectiveness as head of department.

Where supporting staff were concerned, WAIT accepted those deemed suitably qualified but advertised all other positions. At the School of Mines Maitland (Keith) Quartermaine, who had been on the staff for many years, became head of the Department of Mining and Engineering. Collister's appointment has already been mentioned. Others appointed were D. A. Sivyer, W. H. Cleverly, M. E. Wearne, J. T. Robinson, A. J. Crocos, A. R. Burns and R. P. Thomas on the academic side, and W. J. Cahill and J. M. Murphy as administrative staff.²⁸ At Muresk Frank Lambert and A. J. V. (John) Janes were offered posts; all others were advertised. WAIT invited former professional staff to join the Department of Therapy, including senior lecturers Cliff White (physiotherapy) and M. F. (Faye) Belcher (occupational therapy); and lecturers



1 Dr A. J. (Jack) Gilbert, inaugural head of the Department of Therapy, 1969.

2 Maitland (Keith) Quartermaine, head of the School of Mines' Department of Mining and Engineering, 1969.

3 Dr Alwyne Vernon Pegler, appointed principal of the School of Mines in 1969, had graduated from the school eighteen years before.

4 School of Mines staff in 1967. Well-remembered names in the front row (*left to right*): W. J. Cahill, E. Tasker, D. A. Sivyer, E. Johns, R. A. Hobson (retiring director), J. D. Collister, Maitland (Keith) Quartermaine, W. H. Cleverly.

5 Dr Clyde A. Smith, principal of Muresk Agricultural College, 1969.

Pam Bell, Dr Lance Twomey, June Rankine-Wilson, Jennifer A. Needham and Caroline A. Palmer. Royal Perth Hospital released Freda Jacob and Jan Babbage to teach half-time for the whole of 1970.²⁹

WAIT examination of future needs in the branch institutions revealed important challenges. WAIT Director Williams, in a public address at Kalgoorlie in February 1969 (intended partly to allay suspicions), declared policies to raise the School of Mines to national status, broaden its academic profile, build residential accommodation and align courses with those at Bentley.³⁰ Coombe faced a situation at Muresk where enrolments had fallen, possibly as a consequence of the merger, and both the two- and three-year courses needed revamping, the latter into an associateship programme.³¹ First priorities in the Department of Therapy were to reshape existing diploma courses as associateships, integrate them into the WAIT system and improve staff qualifications through staff development.³² The department enjoyed strong student demand, however, in contrast to the School of Mines and Muresk. Staff housing was necessary at Kalgoorlie and Muresk to attract good academics.

Substantial building programmes at the three campuses were planned for the triennium 1970/72. In any event, the Department of Therapy was the only one to move into a new (and long overdue) building, which was opened in 1972.³³ At Muresk attention focused mainly on refurbishing existing buildings, modernising student accommodation and developing the grounds.³⁴ In Kalgoorlie the engineering buildings were completed and new premises for chemistry were approved. The most spectacular development was the construction of Agricola College, a residential facility housing fifty students, which was opened by Brodie-Hall on 26 September 1971.³⁵ He had personally been responsible for badgering \$111,000 in donations from mining companies and local businesses. The State government matched this sum so that a promised grant of \$200,000 from the Commonwealth could be obtained to construct the Brodie-Hall Centre.

In its first years under WAIT the School of Mines encountered substantial problems. The collapse of the mining boom badly affected enrolments and even the Agricola College could not be filled. The school's general associateship course in engineering was withdrawn—it had lost recognition by the Institution of Engineers (Australia)—forcing students to complete their final two years at Bentley. There also were bitter clashes between the school and Bentley staff, and problems with uneconomically small classes at Kalgoorlie. In metallurgy, agreements to specify teaching responsibilities between Kalgoorlie and Bentley proved to be unworkable. Geology presented similar problems because of plans to introduce earth sciences as a major programme at Bentley. Attempts to broaden the base of studies at Kalgoorlie also failed.³⁶

Students meanwhile became angry about delays in appointing new academic staff and brought their grievances to the local press. WAIT received the blame for alleged neglect causing their problems. Notwithstanding some significant improvements in staffing and housing and in grounds development,

the School of Mines faced a very uncertain future, contrasting sharply with the bounding development at Bentley.

Even though the School of Mines under WAIT had gained Agricola College, improved grounds and reshaped courses, enrolments refused to increase. Pegler unsuccessfully tried to introduce 'sandwich' training into the school's courses and he also personally negotiated donations from the Alcoa Foundation to fund a lectureship in metallurgical thermodynamics. The Western Mining Corporation, with local support, funded a recreation centre at Agricola. None of these infusions or experiments appeared to improve the situation.³⁷

Wark, when he revisited Kalgoorlie in 1971, took particular note of the adverse effect the situation appeared to be having on staff morale at Kalgoorlie.³⁸ His solution, to prepare the school for independence from WAIT, found some support with Under-Treasurer Townsing, who confirmed government intentions to move the school beyond its current branch status. The present arrangement, he explained, was a necessary phase to lift the school out of the Mines Department.

At Kalgoorlie, however, staff resentments fed on discontent with WAIT administration and a sense of isolation that compounded communication difficulties. Placement of the school within the Division of Education Services during 1972 appeared to confirm the school's low standing in WAIT priorities, although this had been motivated by the concept of the school becoming a broadly based regional centre.

The upshot of extended deliberations by an Academic Board working party was a proposal to establish a school of earth sciences which would integrate the areas of mining, geology, metallurgy and surveying at both Bentley and Kalgoorlie, under the leadership of heads responsible for operations on both campuses. The idea was intended to retain the historical status of the school but achieve a better integration of resources and staffing.³⁹

The proposal generated a veritable hurricane of public protest in Kalgoorlie, fuelled by local government politicians and lobbyists seeking full advanced education college status for the School of Mines.⁴⁰ Relations between Bentley and Kalgoorlie in metallurgy and geology were at boiling point, while Kalgoorlie wanted reinstatement of the school's general associateship course in engineering. Brodie-Hall entered the lists, drawing upon a statement by Dr John Walsh, then head of the Department of Applied Science and General Studies at Kalgoorlie, to criticise developments at the School of Mines.⁴¹

Examination of the current situation demonstrated that WAIT had not been funded at a level that took cognisance of the high costs of running expensive and small institutions like the School of Mines. Further budget paring and the location of academic leadership at Bentley was believed, in the circumstances, to be hastening the school's inevitable slide into obscurity. In seeking special funding from Canberra, Brodie-Hall and Walsh identified the central economic importance of mining, new developments in petroleum and coal industries, and the cultural importance of extending tertiary education to isolated communities. They both held that State financial support was vital since



STUDENTS AT S.O.M. CEREMONY



DEMONSTRATION

REPERTORY CLUB TO START BUILDING NEW THEATRE NEXT WEEK

About 30 W.A. School of Mines students gathered outside the annual graduation ceremony.

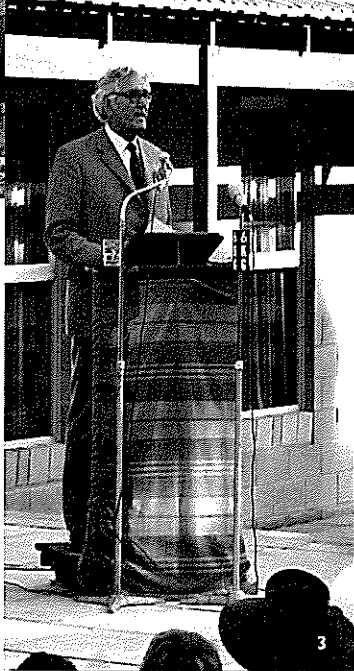
An hour after the ceremony started in the Hobson world, students gathered outside the theatre at the school for several minutes chanting "W.A.L.T." and "We hate W.A.L.T." and "We want autonomy".

They banged on the door and I on the floor. An attendant inside the quickly locked the door and the students from entry.



2 The next week on the first 50,000-plus project to the Repertory Club. A disastrous fire destroyed a man street.

It actually had to start from scratch. The completion of the programme will leave it with a bare theatre — it will also have to finance the purchase of equipment, costumes and other items needed for theatrical productions.



1 Dr John Walsh, head of the School of Mines' Department of Applied Science and General Studies, 1969.
2 & 3 Agricola College, a residential hall for men and women attending the School of Mines, was the brainchild of industrialist (later Sir) Laurence Brodie-Hall, who is shown at the opening of the college in September 1971.
Background: Headlines 'Students in brief demonstration at S.O.M. Ceremony' in the Kalgoorlie Miner, Saturday 11 May 1974. Courtesy Kalgoorlie Miner

neither considered the Commonwealth could be relied upon. The reality was, of course, that after 1973 the State was no longer financially involved in tertiary education; it was completely a Commonwealth responsibility.

The WAIT Council, now in turmoil over the whole issue, adopted a two-pronged strategy. One involved the presentation of a special submission to the Commonwealth for \$2,600,000 for the triennium 1976/78, to finance developments enabling the school to achieve national standing as a centre for mining education and research.⁴² The other dealt with academic organisation. This envisaged the school forming the basis of a School of Mining and Mineral Technology with three separate departments: mining, metallurgy and geology. New positions of dean and head of department were to be filled by open advertisement.⁴³

Under this scheme the school's status was assured through representation by a dean in the mainstream academic structure of WAIT. As a means of integrating resources and staff in metallurgy and geology, it also was intended to appoint departmental heads with responsibilities spanning both campuses.

Dr Ifan (Odwyn) Jones, who joined WAIT as the dean of mining and mineral technology in 1976, started work in the Welsh coal-mines before winning a National Coal Board scholarship that took him to degree studies in science at the University of Cardiff. Afterwards Jones held posts at what was later known as Strathelyde University, the Polytechnic of the South Bank (London) and the Bristol Polytechnic. Before coming to Western Australia, he had established a research background with an emphasis in the areas of construction and environmental health.⁴⁴

At Kalgoorlie he was joined by three new heads of departments. Dr Peter Power, a graduate of the University of Sydney and the University of Colorado, had joined the University of Queensland Department of Geology in 1966, but then resigned to return to work in the petroleum industry. A colourful, forthright and excellent scientist with extensive field experience, Power held a senior position with the North Sea Oil project before accepting the position of head of geology at WAIT. Dr Terence Pyle, with a doctorate from the University of Leeds, came to WAIT as head of the Department of Metallurgy located at the School of Mines in Kalgoorlie. Dr B. White was appointed head of mining and mining engineering.

At Muresk the situation was little better. Student quality was low, failure rates high, enrolments stagnant and the prospects of introducing associateship courses very slim. The future appeared to lie with short courses, external teaching, conference development using the college premises, and the launching of a major publicity campaign to attract students. One major innovation was the admission of women students in 1971. Nonetheless Muresk, like the School of Mines, stood tenuously at the crossroads.

In the period 1973–5 diploma enrolments at Muresk recovered somewhat from the serious slump after 1969, due in part to concerted publicity campaigns and energetic promotion of short course and extension work among the agricultural community.⁴⁵ House rules in the student residence also were

modernised, while students joined in WAIT tours of Europe in 1974 and China in 1975. With improved confidence, therefore, WAIT planned as part of the 1973/75 submission to seek funds for new administrative offices, a lecture theatre, tutorial rooms and for extensions to existing buildings. In 1975 a licensed staff and student club was approved.

Encouraged by improving enrolments, staff began planning for the introduction of the third-year specialist agriculture course, while in 1975 a three-and-a-half-year bachelor course was submitted for accreditation.⁴⁶ The associate diploma course meanwhile was remodelled to emphasise farm management, while electives and small group teaching were introduced. Even with these modifications, a twenty per cent drop-out convinced staff that a new course should be introduced from 1977, offering three streams: farm management, agricultural technology and horse stud management.

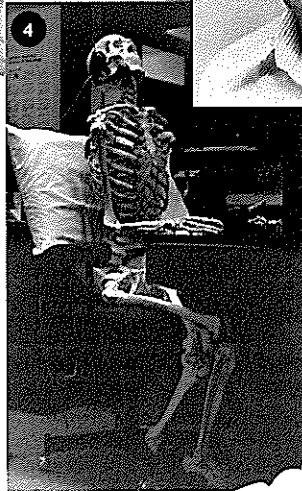
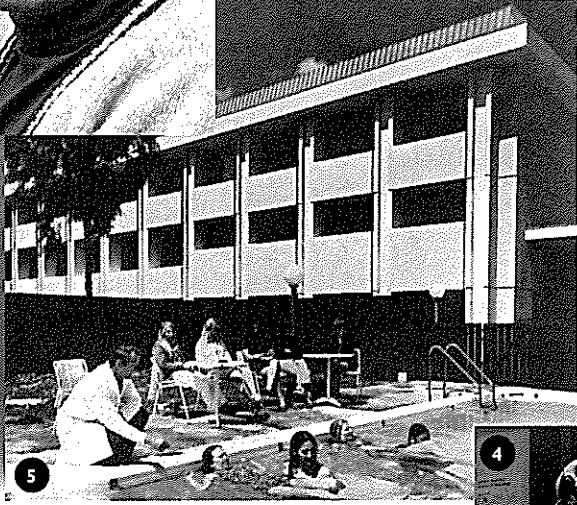
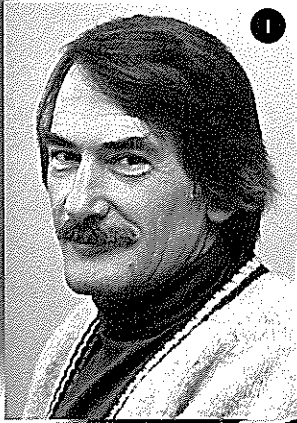
On the broader front, Muresk staff were active in research projects funded by such bodies as the Australian Pig Industry Research Committee and, in a very large contract for the artificial insemination of merino ewes, the Australian Merino Society. During 1976, on the occasion of its 50th anniversary, Muresk hosted part of an International Sheep Breeding Congress held in Western Australia.

Muresk as a 'department' within the School of Applied Science consolidated somewhat during the later 1970s, although the low academic quality of entrants remained a drawback. Courses included the associate diploma in farm management and agricultural technology; a bachelor of business which was a co-operative venture with the School of Business and Administration (1977); and a similar co-operative venture with the Department of English, aimed at training rural journalists and media personnel. Facilities improved with the addition in 1977 of a new lecture theatre and administrative block, a new library in 1978, and a new Student Guild building in 1979.⁴⁷

The future of Muresk, however, became an issue after the Birt Report (discussed in Chapter 8) in 1979, when the State government considered transferring the property and courses to Murdoch University. Although the proposal was rejected, the debate proved very unsettling for the staff. Another unsettling controversy regarding WAIT policies on the employment of short-term contract staff prompted the resignation of Muresk's contract staff in 1979.⁴⁸

The Department of Therapy, by way of contrast, went from strength to strength as enrolments increased and new accommodation at last became available. Integration into WAIT enabled courses to become better designed, made admission requirements more reasonable, and improved student performance. Staff took advantage of development opportunities to obtain higher qualifications and then in 1974 launched into a graduate diploma work that was unique in Australia. Relationships with the profession and clinicians were excellent, enabling students to obtain well-planned practical supervision, while fractional teaching appointments attracted excellent practitioners.

The Department of Therapy faced a new future with the establishment of a School of Health Sciences—part of a complete overhaul of WAIT's academic and administrative structures initiated in 1972–3. WAIT indeed had reached a



- 1 Dr Peter Power, head of the Department of Geology, 1976.
2 Dr Ifan (Odwyn) Jones (*left*), dean of mining and mineral technology, 1976, with R. A. Hobson, who headed the School of Mines from 1947 to 1967.
3 Dr Terence Pyle, head of the Department of Metallurgy, 1976.
4 A skeleton staff at the switchboard of the new therapy building in October 1972.
5 The hydrotherapy pool was a feature of the new therapies facilities opened at Shenton Park in November 1972.



1 This sheep demonstration at Muresk Agricultural College was staged for delegates to the first International Sheep Breeding Congress, 1976.

2 Officiating at the opening of Muresk's new administration building in 1978 were WAIT Council Chairperson Justice Alan Barblett (*standing*) and (*seated, left to right*) WAIT Director Dr Haydn Stanley Williams, State Minister for Agriculture R. C. Old and Muresk Principal Dr Clyde A. Smith.

3 A bird's eye view of Muresk Agricultural College.

landmark in its first stage of development and began gearing up for a burst of unparalleled development in the triennium 1973/75.

School of Mining and Mineral Technology

Notwithstanding the best intentions, developments in the School of Mining and Mineral Technology took on the proportions of tragedy. Most of these occurred between 1975 and 1983 and followed in the wake of the Partridge Report, which is dealt with in more detail in Chapter 8. The Commonwealth had accepted the case for improvements at Kalgoorlie and had set aside \$1,700,000 for building in 1975–6. Budget cutbacks reduced this to \$860,000, held over till finalisation of the Partridge Report. Failure to resolve debates about the future of the School of Mines in the wake of the latter caused the Commonwealth allocation to lapse.⁴⁹

The Western Australian Post-Secondary Education Commission (WAPSEC) deliberations on the school during 1977 were one of several tasks set by the State government after the Partridge Report. There was time, however, for the interested parties—the Chamber of Mines, the local press and community, and the political lobbies—to marshal their forces to oppose the Partridge recommendation to transfer the school's tertiary level work to Bentley. The political will dissipated during visits to Kalgoorlie by Premier Court and Minister for Education Peter Jones to attend the school's 75th anniversary celebrations.⁵⁰

At WAIT academic opinion (although divided) eventually accepted that the transfer should go ahead. The council agreed in July 1976, but when the matter was reopened in April 1977, it reversed its earlier decision and voted to support retention of the school at Kalgoorlie subject to government funding guarantees.⁵¹ The *volte-face* caused great resentment in the Academic Board.⁵² Council resolutions nevertheless encouraged individual staff to make their own opinions known to the WAPSEC committee studying the future organisation of tertiary education in the Eastern Goldfields. In this respect, although the dean, Jones, preferred to remain at Kalgoorlie, two departmental heads concerned—Power and Pyle—wanted to move their operations to Bentley. The school's academic staff, having come a long way in a few years, wanted to retain their connection with WAIT which was central to the future status of the school at Kalgoorlie.

After the WAPSEC committee reported, the State government in October 1977 announced acceptance of the idea of forming at Kalgoorlie a Federation of Post-Secondary Institutions. This would combine the Eastern Goldfields Technical College and the School of Mines in a loose organisation that retained their respective links with the Technical Education Division and WAIT, but merged facilities and resources to form a broadly based college serving the local community.⁵³ A steering committee, chaired by WAPSEC's chairperson, Dr Walter Neal, was appointed to prepare the way for formal establishment of the institution under a newly proclaimed Colleges Act. In 1978 the State government appointed a council for the college, chaired by local businessman

J. MacDermot. This had the task of planning for development of a fully integrated, self-governing college. WAIT Director Williams and the chairperson of the School of Mines Advisory Board, J. E. L. Manners, were members of the new federation council which first met in February 1979.⁵⁴

Despite a high level of local enthusiasm for the new independent college, few if any of the academic community involved would have a bar of it. Head of geology Power resigned, convinced the scheme would destroy his department, a view shared by Pyle in metallurgy. All the School of Mines staff, now facing the prospect of having to be re-employed by the college council, refused *en bloc* to do so. The Technical Education Division, for its part, fought to retain the Eastern Goldfields Technical College under its control. TAFE staff, like their WAIT counterparts, would not join the new college. Nor would the School of Mines students have anything to do with the scheme. By the end of 1979 staff and student morale was all but destroyed. Jones himself suddenly announced his resignation in October over what he described as WAIT's 'stonewalling' on the federation proposals, although he later withdrew his resignation following protest marches by students and appeals from his staff.⁵⁵

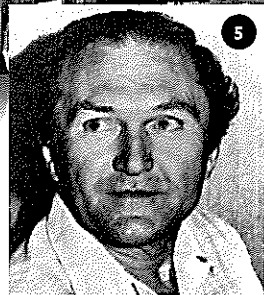
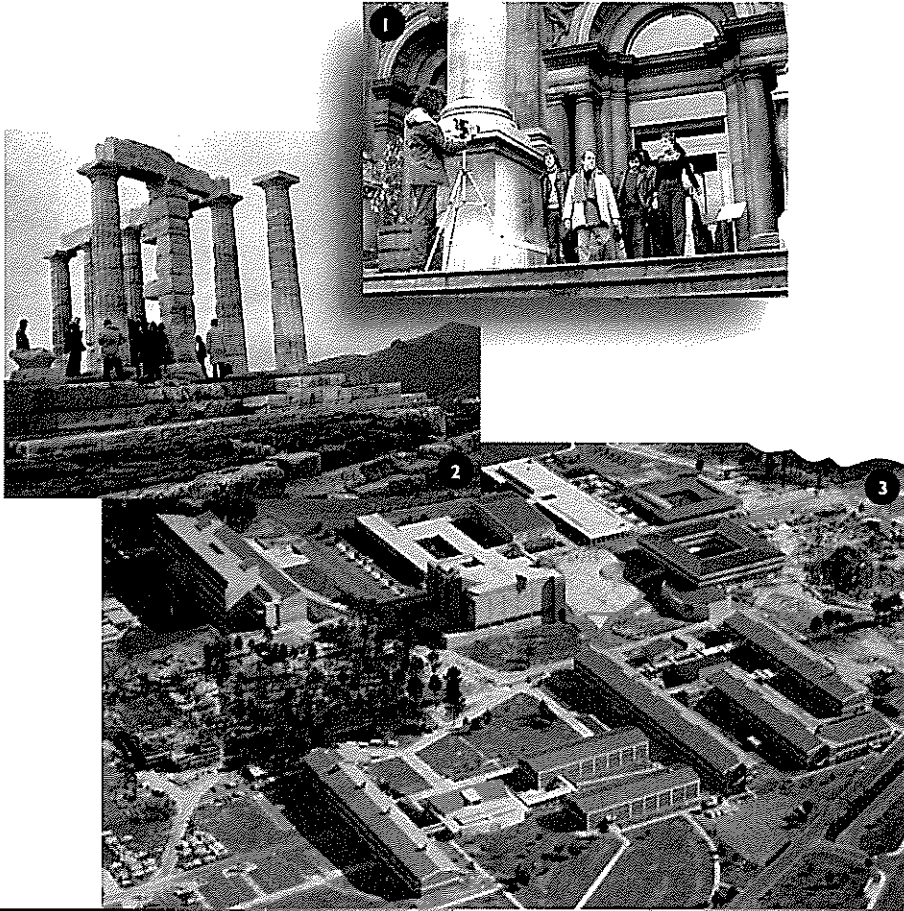
The State government did not wait for the federation council to finalise its report on a plan for the proposed semi-autonomous federated institution, which was expected by April 1980. In February 1980 the minister for education announced that the federation would be established as an independent college under the Colleges Act, to commence operation from 1 January 1981. Contractual arrangements between the new college, the TAFE system and WAIT would need to be finalised by May.⁵⁶

In the eye of the storm around it, the School of Mining and Mineral Technology attempted to remain functional. Staff changes did not help. The Department of Applied Science and General Studies was phased out, its head Dr John Walsh transferring to Bentley. The retirements of Quartermaine and Cleverly were balanced by the arrival of Pyle and Power and, later, White, who succeeded Quartermaine. After the events of 1978 and 1979, however, WAIT dismantled the new school organisation. From January 1980 the Department of Geology was to become part of the School of Applied Science at Bentley. Metallurgy was to be transferred to Bentley as part of the School of Engineering and Surveying and reoriented towards chemical engineering and fuel technology. Discussion favoured maintaining the School of Mines under its old name as a focus for mining-related programmes; but staff morale collapsed and student numbers also failed to rise appreciably. There were more business students at Kalgoorlie in 1979 than in any of the applied science or mining courses.

The situation adversely affected course development and accreditation, although degree courses in applied science in geology and mining geology, and in metallurgy, and a general mining engineering course received approval in 1977. The latter programme sought to minimise School of Mines dissatisfactions with WAIT controls in earlier years. Graduate diploma courses

in natural resources (geology) and metallurgy, and a masters degree in metallurgy were approved in 1977 and 1978.

Financing nevertheless remained the critical problem. State government decisions in February 1979 at least settled matters where the TAFE college was concerned, with promises of grants for equipment and capital expenditure on a completely new institution close to the School of Mines. A library to serve both institutions also was approved. Redevelopment at the School of Mines involved three phases: rehousing the assay laboratory, mineral dressing and allied facilities, and the Kalgoorlie Metallurgical Laboratory, and adding a general science room; extensions to the mining and engineering building; and relocation of the geology laboratories. WAIT set as its first priority for the 1980/82 triennium the completion of extensions to the sciences facilities building. All this still existed in something of a limbo, however, awaiting finalisation of decisions about governance of the new college and about its academic and staffing relationships with the Institute of Technology.⁵⁷



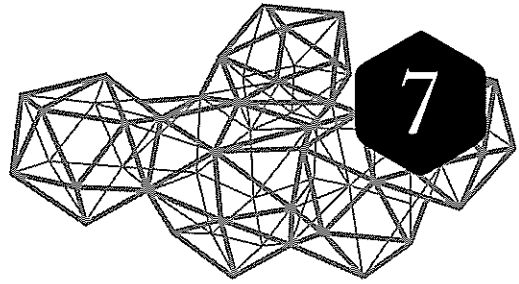
1 WAIT accountancy student and keen film-maker Charlie Musca was shooting film of Art and Design Lecturer Theodore (Ken) Hannen (in pale jacket) at the Tate Gallery leading a group of students during the inaugural WAIT-in-Europe tour, 1973-4.

2 Students on a visit to the Temple of Apollo at Cape Sunion, Greece, during the 1977 WAIT-Abroad tour.

3 Building development on the Bentley campus in 1973 was racing to keep up with enrolments, then numbering 8,000. This picture shows the general facilities building taking shape (far left), and the second stage of the social sciences and commerce building going up (top right).

4 WAIT Council shortly before Roy Halliday Henderson's retirement as chairperson in 1976. *Left to right:* J. H. Barton, Steve G. Forte, A. J. Butchart, D. Baker, Tim Ryan, W. R. Dickinson, Dr K. Corrie, W. J. Paterson, Justice Alan Barblett, Dr Haydn Stanley Williams, Henderson, Peter Yacopetti, Dorothy Robson, Frank W. Dawson, Erica R. Underwood, Reginald C. Buckett, Tom Gosling, Mervyn Parry, Tom Silvan, Dr W. A. (Bill) Pullman, R. Harris.

5 Social Sciences Senior Lecturer Dr Peter Hruby was director of studies of the WAIT-in-Europe scheme.



Academic Development under the WAIT Schools 1975–1980

WAIT's reorganisation into academic schools, supported by a Division of Academic Services and a Division of Administration and Finance, brought to prominence a range of new academic and administrative leaders who imprinted their own ambitions and personalities on the institute. Most of the new staff came from more conventional university careers, with backgrounds in scholarship and research possessed by only a few of WAIT's inaugural staff. For the newcomers WAIT presented opportunities to lead departments and achieve ambitions increasingly frustrated within the university sector. Moreover, WAIT had gained a reputation in the advanced education sector that already rivalled that of many of the newer universities, which could not match it for size, comprehensiveness or drawing power.

In the School of Business and Administration Dean Dolph Warren Zink was succeeded by Dr Ken Hall. Born and educated in England, Hall had completed certificates in mechanical and production engineering and worked in the engineering industry before shifting to economics, management and manpower economics. He had held academic posts at the Birkenhead College of Technology, the Liverpool Polytechnic, the University of Liverpool and, finally, the Heriot-Watt University in Edinburgh, where he headed a manpower studies research unit financed from external grants.¹

In the new School of The Arts and Design the first new departmental heads—Brian Dibble (English), F. J. Murray (Jun.) (social sciences) and R. K. Paget (Asian studies)—came from reasonably conventional backgrounds and held doctoral degrees. The appointment in 1976 of Derek Holroyde as the new dean, however, brought to WAIT a person boasting the most traditional school and university backgrounds. After war service in the Royal Navy, Holroyde completed his university studies at Oxford and worked with the British Broadcasting Corporation (BBC) until 1965, when he took up the post of

director of television at the University of Leeds. This background in the media, his university education, and a deep interest in Indian culture from his experiences as BBC representative in India and Pakistan from 1953 to 1957, were important ingredients in Holroyde's appointment.²

In architecture the 1976 appointment of Dr Laurie Hegvold broke completely with the technical college background of his predecessor. Holder of the University Medal at the University of New South Wales, where he completed his undergraduate and doctoral studies in architecture, Hegvold came to WAIT from a position at Carleton University in Canada. In his mid-thirties, Hegvold had never been near a technical college. He possessed an impressive background of research and publication in Canadian government and university circles at the time he became head of the Department of Architecture—and its youngest staff member.³

New staff appointments at the School of Mines were intended to lay a foundation for more impressive achievements from within a School of Mining and Mineral Technology. The details are presented in Chapter 6, which deals in detail with the branch institutions.

On the administrative side, the WAIT Council in 1974 appointed John Dolin to succeed Howard William Peters. With a background of academic teaching in economics, extensive company interests, and work with the World Bank in Washington DC and South America, Dolin at the time of his appointment was general manager of the Australian International Finance Corporation in Melbourne. On joining WAIT, Dolin found disconcerting the administrative legacies he believed still survived from the public service days of the Perth Technical College. One of his objectives, therefore, was to further extend Peters' private enterprise approaches to financing.⁴

The new leadership joined the old at a critical juncture in the development of WAIT. After the period of dramatic growth between 1967 and 1975, the institute found itself under attack in political and higher education circles. This started with an inquiry chaired by Professor P. H. Partridge in 1975, which raised many questions about WAIT's rate of growth, its role in the humanities and social sciences, the development of post-graduate courses and research, and its role *vis-à-vis* the other tertiary institutions in Western Australia. In the last connection WAIT's incredible growth was seen to threaten the viability of Murdoch University, which opened its doors in 1975, as well as competing directly with the new CAEs created from the former State teachers' colleges.

At the national level the Commonwealth government faced the necessity, in difficult financial circumstances, of funding and rationalising a system of advanced education which had suddenly exploded in the Whitlam years. In these circumstances, continued expansion at WAIT, by now one of the largest CAEs in Australia, was seen to pose a threat to balanced development in Western Australia. It also challenged the ultimate survival of the binary system of higher education, as bachelor and post-graduate degree programmes multiplied.

Academic development under the new school organisation at WAIT, which is the focus of the present chapter, therefore faced impressive odds in the years after 1975. The developments must be viewed in the context of all the external pressures from government and other interested parties seeking to contain the juggernaut they believed WAIT was becoming. The broader policy implications for WAIT are examined in Chapter 8.

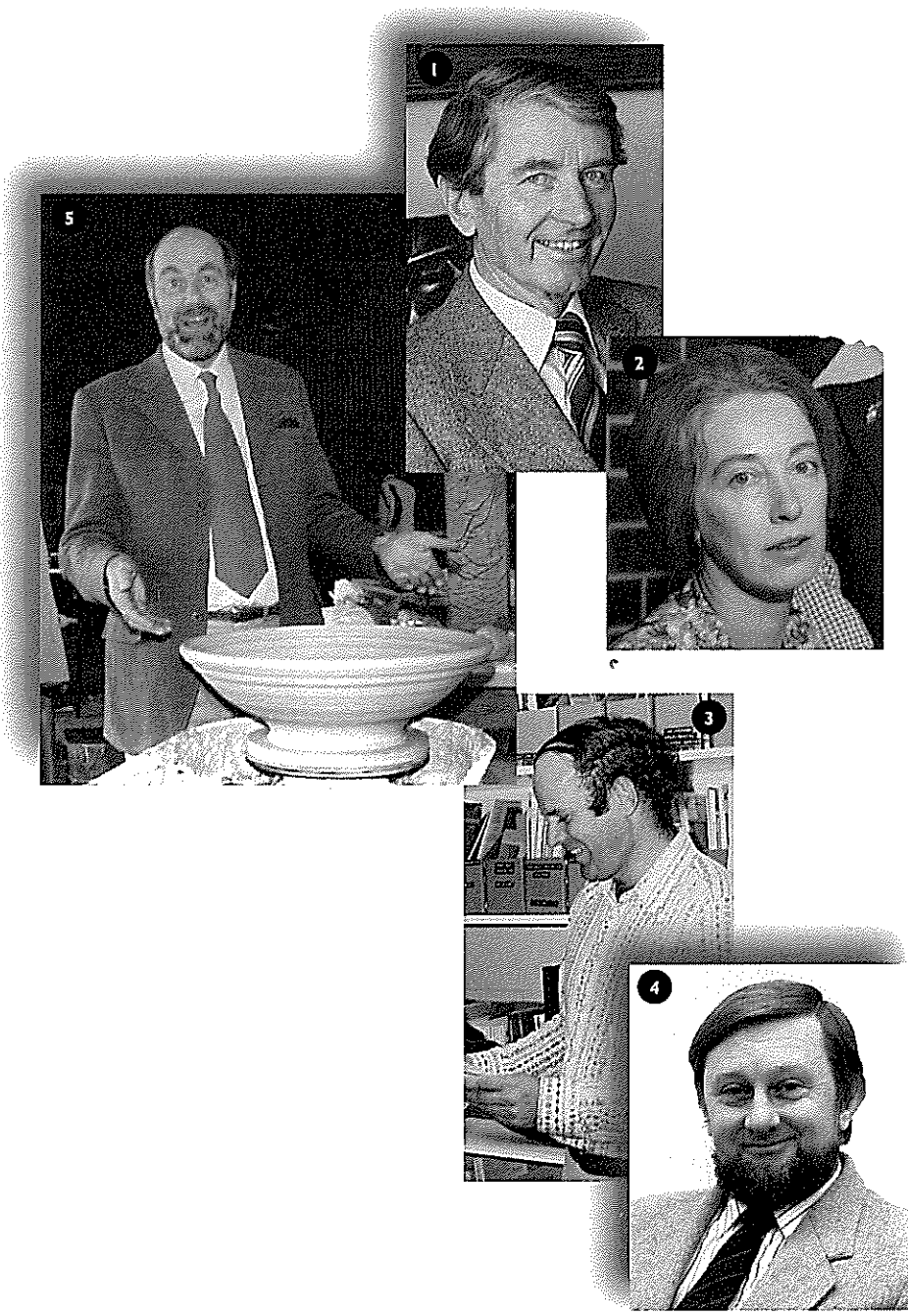
School of Applied Science

Within the School of Applied Science, Dr John de Laeter's first priorities as head were to reassert the role of applied science in WAIT's overall functions, and to infuse the departments with the entrepreneurial research-and-development ethos that had typified the work of the Department of Physics.⁵ Attracting students into the sciences presented difficulties, stemming from the decline of student enrolments, the impact of depressed employment opportunities, the over-supply of school teachers and increasing competition from UWA and Murdoch University, both of which had begun to emphasise applied programmes with an employment emphasis. Developments at Muresk are described in Chapter 6.

The school structure itself affected service teaching in the applied sciences and mathematics, which carried serious implications for staffing levels. A good example was the formation of the Department of Computing and Quantitative Studies in the School of Business and Administration, while there were untidy compromises too, with the School of Engineering and Surveying. Staff:student ratios tended, in the context of falling enrolments, to reduce numbers of contract staff and produce top-heavy staffing establishments.

Under de Laeter's leadership the school responded to the enrolment problem through a vigorous programme to promote science and mathematics in the secondary schools, and to generate industry interest in the employment of applied science graduates. To this end the school produced a promotional film as part of a concerted public relations effort in the schools. Government departments and industry were also surveyed to identify the preferred forms of training. De Laeter himself, with Professor C. Watson Munro, in 1978 undertook a nation-wide study of the destinations of science graduates.

During 1975, the Department of Physics established an education group dedicated to educational development in mathematics and the sciences, especially at post-graduate levels. Overseas specialists Dr David Boud and Professor Lewis Elton assisted in this development during 1976. Dr John Dekkers was appointed in 1978 to establish a Science Education Centre, planned as the focal point of science education at WAIT and in the local community. The applied science departments in 1977 also introduced a general, multidisciplinary bachelor of applied science course, with the needs of teachers and non-specialist scientific graduates in view. Complementing the more specialist courses, this programme was accredited in 1977.



1 Assistant Director (Administration and Finance) John Dolin adopted a more traditional administrative stance than his predecessor Howard William Peters.

2 Ann Sloan was to work with WAIT's decision-makers for nearly two decades as secretary to successive WAIT directors, Dr Haydn Stanley Williams and Dr Don Watts.

3 Dr John Dekkers formed the Science Education Centre in the late 1970s.

TWO SENIOR ACADEMIC APPOINTMENTS TO WAIT'S BENTLEY CAMPUS IN 1976

4 Dr Laurie Hegvold, head of the Department of Architecture, was later to become WAIT's first professor.

5 Oxonian and former BBC broadcaster, Derek Holroyde, joined as inaugural dean of the School of The Arts and Design.

To generate industry interest and involvement, the Physics Department led the way in 1974, under its new head Dr Warren Walker, in the establishment of flexible research and development groups. The object was to design programmes capable of sustaining masters degree students, assisting with interdisciplinary teaching ventures, opening up contacts with industry and government departments, and generating external funds for commissioned projects. Starting from a base of science education, biophysics, earth sciences and materials sciences, the department soon built up an impressive record of research and publication, financial support and contracted activity, which also enabled the funding of outstanding visiting fellows. By 1978 there were groups or centres functioning in atmospheric and marine sciences, biophysics, earth and planetary sciences, physics education, and environmental and marine sciences.

Other applied science departments began experimenting with similar groups. Dr R. B. Alexander and Dr R. Kagi led work in petroleum geochemistry that won industry and Australian Research Grants Committee (ARGC) grants. The Department of Mathematics and Computing Studies introduced groups in computing and applied statistics.

Dr Gerard Leahy's contributions to liberal studies in science and technology at WAIT were considerable. These had small beginnings in the pre-1967 Chemistry Department but later grew into a popular group of units—Science and Society; Science, Technology and Society; Science, Technology and Public Policy—taken as electives by students across the campus.

The school's courses all went through a reaccreditation in 1978–9. The process proved both time-consuming and contentious at the masters degree level, where university opposition within WAPSEC stalled progress. Masters programmes in chemistry and physics nevertheless were functioning in 1977, though with small enrolments.

At the diploma course level the Department of Physics' courses in diagnostic radiography and therapeutic radiography occupied a special place in Australia. Under the leadership of Dr Brian O'Connor the courses won national recognition, typified by the holding at WAIT in 1977 of the First National Conference on Radiography. The Biology Department, which also wanted to experiment with associate diploma courses to meet identified community needs, found itself stymied by opposition in WAPSEC.

The Department of Mathematics and Computing Studies under Stan T. Waddell was heavily committed to service teaching. In computing, however, a very successful graduate diploma course, approved in 1975, catered to identified needs of graduates in industry and government, and complemented the applied science bachelor degree in this field. W. S. Perriman from the Caulfield Institute of Technology replaced Waddell on his retirement as head of department in 1979, and was charged with increasing research and development commitments.

The School of Applied Science gained access to new accommodation with the completion of a new building opened in 1979. Originally delayed because of

the financial traumas of 1975–6, the new building housed the Department of Biology, the Science Education Centre and the dean's suite. On the equipment side, the science departments by now needed to replace apparatus dating back to WAIT's establishment. Two acquisitions were important for the school's research and development work: a gas chromatograph-organic mass spectrometer for chemistry; and an X-ray fluorescence spectrometer for physics.

School of Engineering and Surveying

By 1977 engineering enrolments were being adversely affected by the swing of student preferences to social science and business, as well as by conditions and employment prospects, government support for the TAFE sector and general disillusionment with higher education. Following an overseas study leave, Dean A. H. (Harry) Nash prepared a paper ('Engineering Education for a Changing World') dealing with many of the issues.⁶

Arising out of an extended review of its offerings, the school tackled a range of new developments in the period after 1975.⁷ Heading priorities was a campaign to publicise enrolment and employment possibilities in engineering among secondary school students. On the broader front, the school rejected proposals to adopt a 'co-operative' approach to engineering education involving sandwich training in industry, but preferred the model of a four-year undergraduate bachelor of engineering course. In 1975 this replaced the previously functioning three-year bachelor of applied science (engineering) courses that failed to win acceptance from the Institution of Engineers (Australia).

One innovation involved the introduction of a common first year for all engineering students. More important, however, was the introduction of post-graduate diploma and masters degree courses, which received accreditation in 1978. They included programmes in electronic instrumentation and in chemical engineering. Though initial enrolments were small, staff anticipated demand would increase from professional engineers seeking to update their knowledge or to move to employment in other branches of engineering. Associate diploma courses, particularly in digital systems and computers, also were pursued as a means of countering enrolment slippage and meeting demands for middle level engineering personnel; but these drew criticism for duplicating TAFE technician level courses, which occasioned reviews of relationships between TAFE and the institute. Indeed, TAFE–higher education relationships were becoming a national problem by this time.

On the broader canvas, WAIT engineering courses still lacked a clear definition in comparison with UWA's programmes, and their involvement in research and development activities remained minimal. Dr W. (Bill) Honig was a special case. He broadcast popular programmes on Radio 6NR and undertook research work under contract to the United States Office of Scientific Research. He later built up laboratory facilities and introduced students to the field of bioengineering, besides editing an international journal and generally contributing to public debate about science policy. In the main, however, the

clear trend of enrolment growth was in the area of electrical and electronic engineering. Within the Institute of Technology as a whole, the harder technologies were struggling by comparison with the schools of business and administration, and of health sciences; and there were bitter clashes between engineering (particularly mechanical engineering) and the WAIT administration over staff establishments and resource allocations.

The Department of Surveying enjoyed a comparatively more secure existence, but moved on several new initiatives after 1975. Requests from the Australian Institute of Cartographers in 1976 led to the introduction of mapping options in the bachelor, graduate diploma and master of applied science courses, which all received accreditation during 1977. At this time the courses and the department itself were renamed 'surveying and mapping' to emphasise the new focus on cartography and remote sensing. The latter, emerging from technological advances in the profession, opened access to what later became significant joint ventures with the CSIRO, using a RAMTEK image processor to undertake projects involving LANDSAT imaging signals.⁸ The department, as the only source of surveyor preparation in the State, had no difficulty placing its graduates in suitable employment.

School of Health Sciences

Dean Marc Liveris established a significant niche for WAIT's health science programmes at both national and international levels, in the context of close and rewarding relationships with both State health authorities and professional associations. A visit overseas in 1975 prompted some reorganisation in the new school. His own authority in the field received recognition in 1976, when he was invited by the Organisation for Economic Co-operation and Development's (OECD) Centre for Educational Research and Innovation to join an international group developing the concept of a 'University of Health'.⁹

Under a strengthened leadership base, physiotherapy and occupational therapy were divided into distinct departments in 1975. Dr Lance Twomey became the head of the Department of Physiotherapy (responsible also for podiatry), leaving Gilbert in charge of the Department of Therapy (responsible for occupational therapy and speech and hearing science). Gilbert assumed responsibility for undergraduate biology training in the school when Jo Barker was appointed as head of therapy in 1979.¹⁰ Another thrust in the school was to broaden its base in the fields of community health, health administration and health education, focusing on post-graduate diploma and masters degree levels. Initially opposed by the Commonwealth Tertiary Education Commission (CTEC), the masters course in community health started operation in 1979.

Development of nursing courses in the school after 1975 also encountered Commonwealth resistance. The concept of college-based nursing courses challenged Commonwealth determination to stem 'credential creep' in advanced education, and threatened to contribute to the skyrocketing costs of health care under new national schemes. This resistance ran headlong into pressures from the nurse associations, eager to implement their 'Goals in



1 Dr W. (Bill) Honig, engineering lecturer and entrepreneur, was prominent in debates about engineering, education and science policy.
 2 Jo Barker, appointed head of therapy, 1979.
 3 Thousands of nurses took to Perth streets in 1977 in protest over delays in the award of a nursing degree.
 4 WAIT scientists (*left to right*) Dr R. B. Bradbury, Dr R. Kagi and Dr R. B. Alexander, whose research attracted large grants to WAIT, examining extracts related to research on the dieback fungus, 1977.
 5 Joan Winch in 1977 became WAIT's first Aboriginal graduate in nursing. In 1987 she was awarded an inaugural Curtin University Fellowship for her work in Aboriginal health.
 6 Dr Lance Twomey, later to become one of WAIT's first professors, working on a patient in the new therapy building at Shenton Park in 1972.

Nursing Education' framed at a national workshop in 1975. The Department of Nursing, which had been planned around the introduction of an undergraduate diploma (UG2) and degree (UG1) courses, was forced to rethink its offerings when the Commonwealth rejected a proposed four-year degree course. When the school presented a three-year diploma (UG2) programme, the accrediting panel advised that it should be accepted for the award of a bachelor of applied science. The Commonwealth refused to budge, despite pleas from WAIT Director Williams and nursing authorities. The most it would accept was a one-year conversion to degree course following the diploma.¹¹

WAIT eventually prepared proposals for a post-experience bachelor course that would build on the hospital-based programmes completed by registered nurses, and which were recognised by the Commonwealth as associate diploma (UG3) level programmes. However, this proposal was also rejected by the Commonwealth, which by this time was stalling for time and awaiting the recommendations of the Sax committee on nurse education in Australia.¹²

At the end of 1977 the first of the three-year programme nursing students at WAIT were due to graduate. But with what? The Academic Board suggested the award of a diploma (UG2), to be upgraded to a degree if and when approval was obtained.¹³ An avalanche of protests followed, featuring a march through Perth streets by more than 1,000 nurses and vigorous lobbying of State and Commonwealth politicians and bureaucrats. A Nurses' Action Group and the students prevailed upon the WAIT Council to make no awards at all, with the consequence that the first nurse graduates left WAIT holding no recognised qualification.¹⁴

Commonwealth action on the Sax Report in 1978 accepted degree studies for a modest number of experienced nurses holding recognised diplomas, but favoured the retention of a parallel hospital-based system for the majority of nurse trainees. The decision was fiercely contested by the nurses, but it dictated the pattern for WAIT's diploma (UG2) and degree (UG1) programmes in nursing, with the degree planned initially as a post-registration course. The first nurse degree graduates from WAIT—and the first in Australia—received their awards at the graduation ceremony in March 1979.¹⁵ Williams, who had championed the nurses' cause even when faced with resolute Commonwealth resistance, read out a telegram from the Royal Australian Nursing Federation which was greeted with acclamation.

Subsequently the School of Health Sciences introduced a degree-conversion course for nurses from hospital-based programmes and quickly established the basis for expanded responsibilities in nurse education at the graduate diploma and masters degree levels. The nursing courses were carefully planned with assistance from the Educational Development Unit and from a series of prominent visiting academics from overseas. Parkes, with Lonsdale from the Educational Development Unit, were asked in 1981 by CTEC to carry out an evaluation study of the differences, if any, between graduates of college and hospital-based nursing courses.¹⁶

Nursing occupied part of a long-awaited new health sciences building, which was opened in pouring rain by Professor Peter Karmel during April

1980.¹⁷ A long-proposed anatomy facility was housed on the ground floor, enabling this aspect of WAIT courses at last to be shifted from UWA, where accommodation had been crushed for years. On the second floor was speech and hearing science which had been transferred to Bentley from Shenton Park in 1977. The third floor was occupied by dental therapy, transferred from rented accommodation in King's Park Road, and nursing which had originally been housed in the architecture building at WAIT.

The school underwent a substantial reorganisation in 1979, aimed at enhancing the visibility of such 'small' areas as dietetics, nutrition and food science, environmental health, speech and hearing science, podiatry, and dental therapy, which for administrative convenience had been located within the other five main departments (pharmacy, nursing, medical technology, physiotherapy and occupational therapy). Other objectives were to cater for new fields with a strong interdisciplinary bias (for example, community health) and to focus appropriate organisational emphasis on the role of interdisciplinary education within the school as a whole. Drawing on organisational patterns common in the United States of America, the new WAIT arrangements enabled the establishment of a Department of Community Health Science. Headed by Dr Colin Binns, it embraced degree courses in nutrition and environmental health, a graduate diploma in health sciences and planned further extensions. Cutting across the departmental segregation were two interdisciplinary areas (behavioural science and human biology) servicing the needs of students in all health science programmes.¹⁸

The reorganisation prepared the school for a significant thrust into research and development activities in the 1980s. Continuing education also had made a start, based on an administrative centre established for the purpose. It was perhaps appropriate that in 1979 Alison Dale, who gained her bachelor of applied science with distinction in speech and hearing science, received the Caltex Woman Graduate of the Year award.¹⁹

School of Business and Administration

Dean Dolph Warren Zink, operating out of the business building for the first time in 1975, effected several measures to enhance the school's reputation in the local community. Under the leadership of David Paris as community liaison officer, the school launched a year-long programme which featured extension courses, seminars, consulting assignments, and meetings with professional associations and key government and business personnel. All the various advisory committees were re-formed into the one school advisory council, comprising twelve distinguished representatives from government, business and labour.²⁰

Under Zink the school substantially reorganised its departmental structure to meet the needs of course co-ordination, better leadership in particular areas and increased efficiency.²¹ Particularly important were the appointments of George Kelly to head a new Department of Computing and Quantitative Studies, and of Dr J. G. (Jack) Williams as co-ordinator of graduate studies in the school. Williams also undertook the co-ordination of reaccreditation for the

bachelor courses, successfully completed in 1976, and later performed the same role for the post-graduate programmes.

Dr Ken Hall, Zink's successor as dean, in 1979 established new departments of business law and of economics and finance.²² Business law was headed by D. Yorke from Scotland; economics and finance went to D. Frearson. Dr Fred Frost succeeded Williams as head of the Department of Management when Williams retired in 1979.

Dr J. G. (Jack) Williams was responsible, with Assistant Director (Academic Services) Dr Tom Kennedy, for initiating in 1978 WAIT's first off-shore programme for overseas students.²³ He had pioneered the teaching of educational administration at WAIT, which had attracted healthy external enrolments until the field was taken up in other Australian institutions. Extending external study opportunities to Singapore and Malaysia became another option once the Australian student numbers began to fall. Williams and Kennedy discussed the possibility with Ministry of Education officials in Singapore and Malaysia, who were interested enough for Professor Paul Chang, from the Universiti Sains Malaysia (Penang), to visit WAIT in July 1978. The innovative feature was that the course would be self-supporting and thus outside enrolment limits imposed by the Commonwealth government.

The scheme got under way in August 1978, with twenty experienced teachers and headmasters from Singapore and Malaysia enrolled in the diploma course in educational administration, and another forty scheduled to enrol for the graduate diploma course in educational administration. In December 1978 WAIT Director Williams, Dr J. G. (Jack) Williams and Dr Patricia Jones all visited the students who were studying the external course, which was prepared by the Department of Management. Dato T. K. Wen, managing director of Selangor Properties, a development company in Kuala Lumpur, donated \$12,000AUD towards the purchase of appropriate texts to be located at the Universiti Sains Malaysia. From the WAIT viewpoint Dr J. G. (Jack) Williams had pinpointed the key advantages—in a 'no growth' situation, similar entrepreneurial ventures might be a financial necessity in future years.

WAIT's business programmes were the object of damaging criticisms during the difficult period after 1975, when they were painted as inappropriate to the work of an institute of technology. Hall effectively dealt with that situation in an address to the WAIT Council in 1977, later published, which outlined the essential symbiosis between technology and business.²⁴ Nor did the school's graduates find difficulty obtaining employment. At a time when enrolment in the sciences and technology and in the social sciences was stagnant or falling, the School of Business and Administration could usually compensate by taking on more students. It was for this reason that business staff resented the level of resources going into the applied sciences and technologies while their school carried the highest student:staff ratios at the institute.

Two problems remained acute throughout the period: the high failure rates among part-time and external students; and the difficulty in recruiting or holding academic staff. On staff, as fast as new academics were appointed,

others left for more highly paid positions in the profession or industry. As for student performance, the school devoted considerable attention to its teaching responsibilities, but the difficulties facing part-time and external students were largely beyond its control.

School of The Arts and Design

Within the School of The Arts and Design, head of architecture Laurie Hegvold concentrated on obtaining accreditation for the architecture degree course. Courses accredited in 1976 included: the three-year bachelor of applied science (architectural science); a three-year bachelor of arts (architectural studies); and the five-year bachelor of architecture course (for which the bachelor of applied science course formed the first stage). After some modification, a three-year bachelor of applied science course in quantity surveying also received accreditation, in addition to a bachelor of arts in urban and regional studies and a graduate diploma course in urban planning. The Architecture Department also moved into the research and development field, one example being work for the State government on a \$25,000 grant to survey housing density policy issues and regulation. e

Compared with architecture, the course situation in art and design proved more difficult. The department moved into new buildings during 1976, but experienced difficulty in achieving accreditation for new degree courses in some areas. Panels approved degree courses in fine arts (painting major), design (industrial design major), and art education; but a year passed before others—fine arts (printmaking and sculpture), design (craft major), and graphic and communication design—were accredited. In 1978 WAPSEC refused recognition of the bachelor of arts (art education) course.

Staff morale sagged under the impact of these reviews and then faced criticisms arising from the Partridge Report. A WAPSEC committee, examining needs of the performing arts in Western Australia, capped a period of disappointment by destroying proposals to introduce executant music, and undermining ideas about establishing an arts complex at WAIT.²⁵ A proposed autonomous college of the performing arts suggested by the committee, perhaps located at Bentley, was eventually placed with the Mount Lawley CAE in 1979.²⁶

The school's spirits were somewhat lifted in 1979, when another WAPSEC committee (on art, craft and design education) reaffirmed WAIT as the State's only source of degree level studies in the creative arts and recommended that this base be strengthened.²⁷ It favoured the model of three-year degree courses, capped by post-graduate diplomas offering specialist opportunities as the market demanded. Better integration with the TAFE system also was advocated, with proposals favouring introduction of a 'foundation year' of artistic studies in TAFE, from which students might be recruited into WAIT.

During 1978 the school undertook an extended review of its objectives and its disadvantages: high enrolments, makeshift and dispersed accommodation, the concentration of specialist leadership, and a lack of senior lecturers. In

considering the situation, Dean Derek Holroyde called for the institute to reassert its broad definition of technology, stressing the high demand for personnel in journalism, film and television, and radio broadcasting. Holroyde foreshadowed the possibility of establishing a new department embracing the communication arts and the media, perhaps headed by a co-ordinator.²⁸ All the proposals were too late for implementation in 1979 (as contrasted, for example, with changes in business and administration, and in health sciences) and were very much the centre of wider controversies in the State.

School of Teacher Education

The School of Teacher Education under Dr Walter Neal developed in ways that set it apart from most similar organisations around Australia.²⁹ First, its range of diploma and degree programmes (for early childhood, primary, secondary and, later, tertiary and technical teachers as well as post-graduate students) was wider than in most institutions. Second, the school was large, adding more than 800 students to WAIT's enrolment in 1976. Third, programmes were consciously integrated with the rest of WAIT to draw on the rich disciplinary resources of other departments and to promote contact between intending school teachers and students preparing for other professions. Fourth, the school adopted a more generalist approach to the teaching of method and curriculum than was then common in Australia, featuring such units as analysis of teaching and strategies of teaching that were offered across the various levels of primary, secondary and tertiary teaching.

Size and complexity were catered for by a matrix organisation led by functional co-ordinators, rather than one based on discrete departments; but rapid growth—250 students in 1974; 500 (1975); and 820 (1976)—put the initial staff under tremendous pressure. Recruitment was a continuing problem, for the school attracted staff whose quality quickly led to their appointment to senior posts in other organisations: Neal in December 1976 went to WAPSEC as its chairperson; Dr Stephen Hunter was appointed WAIT's planning officer in 1977; Dr Leo Foster in 1981 resigned to become director of the Phillip Institute of Technology; and Dr Bruce Keepes went to a senior post in South Australia.

The school was fortunate nevertheless to have been established before teacher over-supply became a serious issue. Moreover, its new building was finished before the financial clampdown on higher education in 1976. The new building included a Curriculum Resources Centre, which in time developed into one of the nation's finest collections of this material, and a terminal room for computing.

However, in relation to a WAPSEC inquiry into teacher education, to the Birt Report, and to deliberations of a committee canvassing the possible transfer of WAIT's early childhood education to Murdoch University, the institute was obliged to defend itself vigorously. Ultimately WAIT retained its programmes, although with a reduced commitment in early childhood education to facilitate development in this field at the Churchlands CAE.³⁰ General quota restraints on teacher education to minimise graduate over-supply

cut early childhood and primary student intakes by thirty per cent in 1977, but were offset by increased intakes into the bachelor of education course. WAIT's breadth of offerings on this and other occasions enabled the school to cope with similar external policy shifts.

More serious, perhaps, were challenges by the universities, and Murdoch University in particular, to course proposals. At the undergraduate level the school in 1978 eventually won a battle with WAPSEC, to introduce a concurrent pre-service bachelor of education course of four years' duration. This enabled the school to incorporate streams of art and industrial arts into the bachelor of education course and so broaden its base beyond the social sciences and applied sciences. When the school put forward graduate diploma and masters degree proposals in the areas of curriculum and educational technology, more opposition surfaced. The Commonwealth government eventually relented in 1979, however, enabling the course to commence in 1980. Murdoch University's School of Education had vigorously challenged WAIT's right to grow into the masters level, a situation which on one occasion placed Neal, in his later role as chairperson of WAPSEC, in a position where he used his deciding vote to reject the masters course.³¹ Writing into the degree submission a suitably acceptable 'applied' emphasis eventually satisfied semantic sensibilities among the university critics.

The introduction of courses for TAFE teachers offered another growth area for the WAIT School of Teacher Education. On the research and development side, the School of Teacher Education in 1977 quickly established a Centre for the Study of Teaching, designed as a focal point for outside research projects and consultancies. One such study—of teaching in TAFE colleges—was undertaken as a joint project with the Technical Education Division of the State Education Department. Teacher education staff also co-operated with the WAIT Department of Psychology to operate a Learning Consultancy Centre, and introduced summer sessions ('SUMMERWAIT'), while individual staff were highly successful in winning research grants from such Commonwealth bodies as the Educational Research Development Committee.

School of Social Sciences

Between 1975 and 1980, the School of Social Sciences found itself under attack from almost every quarter. From its establishment in 1974, the school suffered from the barbed assessments of the Partridge and Birt reports, of politicians and even of speakers at the Yanchep seminar of 1977. To make matters worse, enrolments began to fall, notably in Asian studies, social science and in home and consumer studies. Even in library studies and in social work, the previously buoyant employment market was set to tighten appreciably. As a consequence, issues of redundancy among staff, possible closure or transfer of programmes, and student intake quality were constantly on the school agendas. Staff:student ratios were the worst at WAIT. Many academics resigned, although the patterns of resignation and even terminations of contract staff positions failed to match the needs of the school as it adjusted to the new situation. Morale suffered

accordingly, while course accrediting panels between 1976 and 1979 became disturbed about approving programmes that, in their view, were understaffed and under-resourced.

At head of department level the school experienced a period of serious instability. In library studies, for example, after Dean resigned in 1977, his position was filled (only after a two-year search for a replacement) by Dr Naney Lane, from the University of Adelaide. Finding a head for the separate Department of Social Work, formed in 1976, proved so difficult that the post was filled by overseas visitors for three years. R. Tweedie acted as head of the new Department of Psychology, also formed in 1976, until the arrival in 1977 of Dr Ronald K. Penny as the permanent head of department. In Asian studies the first head, Dr R. K. Paget, resigned in 1976, to be succeeded in very difficult circumstances by one of the former senior lecturers, Dr G. K. de Heer. In social sciences Dr F. J. Murray (Jun.) lasted as head only till December 1978, when he was succeeded in an acting capacity by W. S. (Bill) Cooper until the appointment from London of Dr Geoffrey Williams, a specialist in international relations. Indeed the only stable headship was in home and consumer studies, although Dufty remained as dean throughout the period.

Fortunately for WAIT, most of the social science bachelor courses received accreditation before 1976, but their problems were acute when the courses came up for reaccreditation in 1980. School-based graduate diploma and masters degree courses, first proposed in 1976, were rejected by WAPSEC in 1977. The masters programme, after being redesigned, was again rejected in 1978 on the grounds that it duplicated courses at the universities. Murdoch University resistance to the masters degree proposals was particularly strong. The school effort afterwards concentrated on a graduate diploma programme with specialisms in applied geography, helping skills, community psychology, home and consumer studies, and social administration.

More specialised post-graduate diploma programmes fared rather better. In psychology, for example, the Australian Psychological Society extended professional recognition to a sequence involving the three-year bachelor of applied science (psychology) followed by a one-year graduate diploma in counselling psychology. At the graduate diploma level the Department of Library Studies in 1977 ran into difficulty with a proposed course designed to upgrade the knowledge and skills of practising professional librarians. The accrediting panel, while commending the course, refused recognition until adequate staffing levels had been guaranteed. Lane's arrival in 1979 promised to improve matters.

In seeking additional students, the school examined possibilities at the associate diploma level. The Department of Social Work in 1978 remodelled one such course, but this ran into criticism for duplicating community welfare courses in the Technical Education Division. More successful was the external offering of the bachelor of social science course with a social welfare major, which proved attractive as a degree conversion programme for students in several other Australian States. In other directions, departments ran special



1 The first phase of the teacher education building, completed in 1977.

2 Dr Walter Neal, inaugural dean of the School of Teacher Education, 1974, and later chairperson of WAPSEC (1977–81).

3 Dr Stephen Hunter took on the newly created role of planning officer, 1977.

4 Dr Ken Hall succeeded Dr Dolph Warren Zink as dean of business and administration, 1976.

5 Dr Nancy Lane, appointed head of the Department of Library Studies, 1979.

short courses for Aboriginal welfare workers, sponsored by the Commonwealth government and State government, and also introduced similar courses for librarians from Papua New Guinea and other parts of Southeast Asia.

Under stresses to reduce staff and phase out particular programmes, the school scaled down offerings in anthropology and economics, with the latter being transferred to the School of Business and Administration in 1979. At this time psychology began to consider transferring to either the School of Applied Science or the School of Health Sciences, where staffing formulae were more generous and logical linkages existed. Straitened finances also affected operations in a social work clinic set up in 1977 in Sussex Street, Victoria Park. In conjunction with the School of Teacher Education, the Department of Psychology in 1977 opened a Learning Consultancy Centre, with the object of providing an interdisciplinary and experience-based opportunity for its own students, as well as operating a service benefiting the local community.

In Asian studies the financial and staffing situation was so serious that transfer of staff, programme and library holdings to Murdoch University was considered in 1979–80. (This followed deliberations in the Birt committee and a government committee chaired by Neal in 1980. The outcome is reviewed in Chapter 11.) WAIT's small department, like others nationally, cast around for a suitable role, measured the demand for graduates and service teaching, and sought to co-operate with other institutions involved in Asian studies. The ultimate irony is that WAIT retained a base of Asian studies and language teaching that surged in popularity later in the 1980s, especially when linked to business courses.*

WAIT Library

Difficulties experienced in the academic departments were mirrored in developments affecting the Robertson Library after 1975.³² Ironically, some of the library's problems stemmed from the grant of \$500,000 for acquisitions, advanced by the Whitlam Labor Government as part of a \$5 million allocation to CAEs in 1973. Workload increases in acquisitions and cataloguing led to the recruitment of additional staff, funded from the library's normal acquisitions budget, and also contributed to a heavy backlog of uncatalogued material. At the same time, the library adopted the Universal Decimal Classification (UDC) system and began developing a complex machine-readable catalogue database. Many library staff, as well as academics and students, found difficulty adjusting from the familiar Dewey classification system.

Eventually work pressures among library staff, interpersonal clashes and criticism by academics built up to the point where staff called for intervention by the institute management. In 1974 librarian Geoffrey Allen himself called for an external review of library performance and prospects. That review culminated in a report that fundamentally changed the directions of library

* See Appendix 5 for details of enrolment figures, 1976–81.

policy from 1976. It failed, however, either to resolve personality clashes or to reduce the work backlog arising from the acquisitions bonanza of 1973–4.

WAIT Director Williams took executive action on the recommendations of the external inquiry, after disagreements among library staff produced something of an impasse. Policy changes included returning the library to the Dewey system, which served to exacerbate the cataloguing backlog; another was for the library to introduce automated cataloguing procedures and minimise local modifications to cataloguing data; a third was to reduce the library staff establishment from 135 to 110, on the understanding that technical processing economies would reduce the demand for staff.

Allen sees 1975 as a watershed for the Robertson Library which afterwards struggled financially, along with the rest of the academic departments, to cope with ever-diminishing budgets and staff cuts at the same time as library usage and student numbers continued to rise. Even so, the library achieved notable successes in automation, placing it at the forefront of Australian college libraries, and maintained a dedication to reader services and education programmes. Nothing could prevent, however, the strains on services and holdings induced by reduced budgets and staffing. Stage 2 of the library building did not proceed in 1976 as planned, owing to Commonwealth funding cuts. Indeed this had to wait till 1989. It was probably fortunate that the grants in 1973 and 1974 established a reasonably high base-line from which the library could function in more straitened financial circumstances.

Research and Development

The creation of schools, as well as the formation of interdisciplinary centres allocated specific cost centres in the WAIT budget, helped to stimulate the growth of research and development activity in the period 1975–80. This, in turn, built upon a base of staff development policy extending ‘seed’ grants (\$154,000 in 1978), as well as the growing success of particular individuals in winning competitive research grants. Increasingly WAIT departments began also to attract money for applied projects from government and industry. The total value of external research funds, only \$114,000 in 1977, stood at more than \$600,000 in 1980.³³ This activity increased against the prevailing winds of Commonwealth and State policies and the philosophy of advanced education itself. Increasingly, however, the non-education ministries of government, and industry itself came to recognise the value of WAIT’s research and development work.

WAIT actively encouraged government and private-sector organisations to locate their operations in close proximity to relevant WAIT academic departments. Good examples of this occurred in 1978 and 1979, when the Commonwealth Department of Science Bureau of Meteorology leased land from WAIT and occupied a building on campus that enabled joint use of a climatological area by the Bureau of Meteorology and the Department of Physics.³⁴ Similar co-operation between WAIT and the Solar Energy Research

Institute of Western Australia resulted in the siting of a solar energy generation plant on land at Bentley.³⁵

Dr Peter Power, with Dr Ifan (Odwyn) Jones, initiated a more ambitious project in 1978, when they raised with the State government the possibility of establishing an institute to promote research in the mining, mineral and petroleum fields.³⁶ Two overseas visitors providing advice on the scheme: Professor A. K. Wynn-Edwards, the assistant secretary, Ministry of State and Technology in Ottawa; and Professor D. A. Pretorius, the director of the Economic Geology Unit at the University of Witwatersrand, South Africa, met with State Minister for Industrial Development, Mines and Fuel and Energy Andrew Mensaros to discuss the project. Premier Court was especially interested because of the State's heavy economic reliance on the mining industry.

Originally intended to be associated with the School of Mines with links to government, the scheme was widened to embrace the concept of a Mineral Research Centre involving WAIT, UWA and Murdoch University. This became the basis of the Western Australian Mining and Petroleum Research Institute (WAMPRI), established in the 1980s but announced by Premier Court at the School of Mines Annual Conference in November 1979.

Dr John de Laeter pursued a somewhat different line in 1979 when seeking to establish at WAIT a Centre for Isotopic Studies. Central to this project was replacement of WAIT's ageing mass spectrometer, which was eventually funded with Commonwealth government assistance in the 1980s.³⁷ In the meantime, de Laeter had enlisted the enthusiastic support of Sir Laurence Brodie-Hall, UWA and the Geological Survey of Western Australia. Premier Court, although initially receptive to the idea, had refused State assistance upon discovering that the original equipment had been purchased with Commonwealth money in 1968. He had also begun suspecting WAIT's motives in seeking equipment for research and development work, which ran counter to advanced education policy; and he also queried whether the proposals meshed appropriately with the government's own plans for the School of Mines.

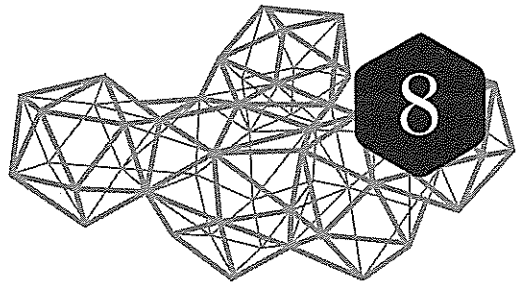
The two ventures heightened the significance of de Laeter's 1978 Study Leave Report in which he asked WAIT to consider establishing, in conjunction with the State Department of Industrial Development, a technology park on vacant land close to the institute.³⁸ In his view the proposal meshed closely with WAIT's role in serving local industry and would also promote research and development, in keeping with national policy at the time. Universities were little concerned with industry-driven research and development. Direct benefits to WAIT were thought to include greater involvement with the community; a higher public relations profile; the attraction of external funding; economic returns to the State; integration of teaching, and research and development activity; and the availability of employment and experience for students. De Laeter, at the 1977 Yanchep seminar, had spelt out the importance of moving WAIT beyond the constraints of the binary system of higher education.

WAIT's role in post-graduate education and research was vigorously defended in WAIT's submission to the Birt committee in 1979.³⁹ This recorded an impressive range of publications by WAIT staff, and research grants, summarised in Table 7.1. It also contested the view that WAIT's post-graduate programmes, even those outside the applied sciences and technology, duplicated work in the universities. The WAIT graduate diploma and masters degree courses in business and in education, for example, focused heavily on applied professional practice and community need. In other fields such as pharmacy, surveying and mapping, the health sciences and library science, there were simply no university programmes available in Western Australia.

Origin	Funds (\$)
Funds from such agencies as ARGC & govt & industry sources (31 projects)	212,255
WAIT-AID income from research consultancy & development (355 projects)	235,106
Staff development committee allocations	156,223
Educational research & development projects under the mini-fellowship scheme	40,000
Money allocated to the visiting fellowship scheme	61,000
TOTAL	704,584

Source: WAIT, Submission to the Birt committee, 1979.

In spite of a host of adverse conditions (the stagnant economy, staffing problems, criticism in the Partridge and Birt reports, rising opposition from the universities, and even growing resistance in such bodies as WAPSEC and CTEC), WAIT initiatives continued to mount during the late 1970s. Significant areas of future development and conflict with advanced education philosophies nevertheless were becoming clearly defined. Frustrations experienced at WAIT in rising beyond the narrowly determined bureaucratic parameters imposed by the binary system would later spark bitter confrontation. Signs of this were already evident in the opposition to WAIT's development that surfaced during the period 1975-9. The situation would considerably worsen in the 1980s.



WAIT under Siege

The momentous events of late 1975 carried WAIT and the rest of Australian higher education into a period of 'steady state' operations. WAIT Director Williams, in his staff address of February 1975, had already warned about the erosion of public support for higher education. He also warned that governments, now aware of the Borrie Report, were apprehensive about building up facilities '...to deal with the demands of the next four or five years only to find that these no longer are required'.¹ A year later the picture was even grimmer:

What I want to repeat here is that we have to be realistic. There was an initial feeling, well tough luck—1976 is a bad year, we will live through it. The sooner we realise that '76 is the face of the future, the face of the best of the future...²

His 1976 address reviewed the major events of the year, the most significant being the Partridge inquiry into post-secondary education in Western Australia. The newly elected Court Liberal–Country Party Coalition Government commissioned the inquiry in 1975 on advice from the WATEC. The position of TAFE in a more comprehensive system of post-secondary education was the stated reason, though the Coalition also was anxious to reassert States' rights under the new Commonwealth control of tertiary education, and particularly where teacher education was concerned.³

For the rest of the decade WAIT found itself dealing with the effects of the Partridge Report and shrinking Commonwealth budgets. The newly elected Fraser Government in June 1976 announced the introduction of a 'rolling triennium' to operate between 1977 and 1979, involving the annual updating of institutional plans. It reintroduced capital funding on a reduced basis, but warned of only marginal increases to recurrent spending. At the same time, CTEC was created by the merger of the former Australian Universities Commission, the advanced education and TAFE commissions, thus consolidating a shift in priority towards TAFE development. The government

also appointed Professor Bruce Williams to conduct a national inquiry into education, training and employment in Australia. The combined impact of these changes produced what can best be described as a 'winter of discontent' at WAIT.

WAIT entered the period under a new chairperson of council, Justice Alan Barblett, who succeeded Roy Halliday Henderson when his term expired in 1976. Barblett had joined the WAIT Council as a legal adviser in 1969, on the recommendation of WAIT Director Williams (who had actually taught Barblett years earlier in Sunday School). Educated at the Perth Modern School, as were so many other WAIT personalities, Barblett held degrees in law (1950) and arts (1954) and had just been appointed inaugural chairperson of judges of the Family Court of Western Australia. Barblett's other achievements included membership of the national hockey team at the 1956 Olympics and appointment as procurator of the Presbyterian Church of Western Australia (1964–76). The father of five, Barblett had been singled out by Henderson as the most suitable to succeed him as chairperson.⁴

As a means of recognising Henderson's long and dedicated service, the council broke new ground by introducing the degree of honorary doctor of technology. Criteria for the award included service to WAIT, a high level of performance in field of expertise and service to the community. Henderson, who was about to become national president of the Australian Society of Accountants, was a worthy recipient of this first award. For the purpose, the council commissioned the design of a medallion and appropriate academic dress from the WAIT Department of Art and Design. Another council decision was to name as 'Henderson Court' the central internal courtyard bounded by the Robertson Library, the chemistry, physics and mathematics buildings, and engineering and architecture.⁵

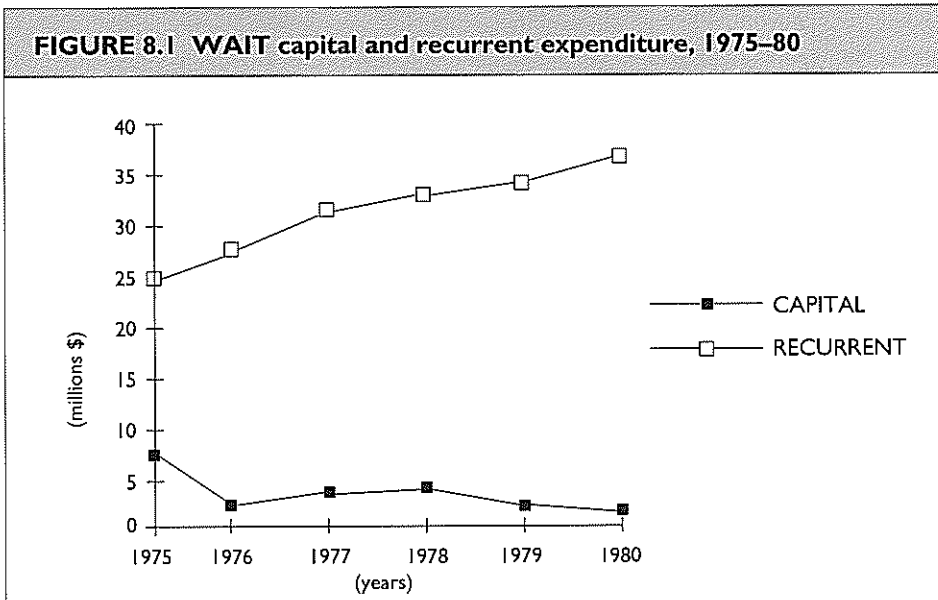
There were several changes in council membership when these became due in March 1976. Among the new members: K. D. (Des) O'Sullivan, principal of St Norbert's College, who replaced W. R. Dickinson; (later Sir) James Cruthers, then head of TVW Channel 7, who replaced Tom Gosling; and Bridget Faye who was a new government appointee. Erica R. Underwood accepted election as deputy 'chairman' (after declining to be described as 'chairperson').⁶

During 1976 the council resumed discussion about its own role. One outcome was to extend the involvement of external council members in internal policy discussions. The other key outcome was the formalisation of regular dinner addresses by key members of academic staff. This was intended to promote more extended discussion of policy, which in Barblett's view had been hitherto swamped by preoccupations with capital development and unrelenting growth.⁷

The reconstituted council found little time to deliberate, however, before being plunged into a range of contentious concerns affecting the very future of WAIT. These started with budget strategies but quickly extended to even more fundamental issues concerning the institute's role in higher education, the future of the School of Mines, and eventually the process of finding a replacement for WAIT's inaugural director who retired at the end of 1979.

Balancing Budgets 1975–1980

Even a cursory examination of capital and recurrent expenditure at WAIT between 1975 and 1980 (see Figure 8.1) reveals the impact of Commonwealth steady state funding policies. The major casualties were stage 2 of the Robertson Library, the arts complex and stages 2 and 3 of the education building. WAIT did receive approval for construction of new buildings for applied sciences and health sciences, extensions to the therapies buildings at Shenton Park, and stage 4 of the engineering complex.⁸ Economies exacted in the engineering project were a disappointment, however, since the school had endured substandard accommodation longer than most and the final stage would have completed a long-planned transformation of facilities. Engineering departments were forced to share accommodation with others, particularly surveying, in buildings originally designed with their own needs as first priority.



Source: WAIT, Annual Reports, 1975–80.

WAIT's recurrent budget for 1976 contained strategies that were to become typical of subsequent years. It was framed against reduced enrolments (a consequence of the emergence of business courses at Churchlands CAE and social science programmes at the Mount Lawley CAE) and heavily trimmed Commonwealth spending. Measures to contain expenditure included: increasing student:staff ratios by 0.5 per cent; holding the line on support and technical staff; reducing administrative staffs; enforcing quotas of part-time and contract staff; reducing staff development spending; reducing overtime; cutting costs of cafeteria and services staff; introducing self-supporting fees in residential halls; reducing library acquisitions and staffing budgets; eliminating central subsidies wherever possible; and even holding the line on the need for computing staff.

The policy on student:staff ratios drew immediate protests from the ASA, which had hopes of ensuring the appointment of a larger proportion of higher level academic staff.⁹ Staff were further concerned about budget reductions to educational services and staff development.

In the final analysis, recurrent funding problems were far from acute. By 1979, when capital development came to a virtual standstill, much more stringent measures were enacted.¹⁰ In July 1978, faced with a possible deficit of \$1.2 million, the Institute Planning and Resources Board aimed to cut staff costs by 2.5–3.0 per cent. It launched a concerted economy drive featuring a freeze on staff appointments; 'user pays' policies with respect to services; and reductions in administration, maintenance, cleaning and grounds expenditures among other cutbacks, particularly in the arts. New Commonwealth policies, moreover, forced WAIT into unpopular charges for parking, and eliminated special funding for library acquisitions. WAIT also reorganised its equipment committee, which prepared inventories of institute resources and facilities with a view to rationalising use, maintenance and purchases. Fully computerised, this innovation attracted a good deal of attention from other tertiary institutions including some universities.¹¹

For the future, capital expansion by way of persuading outside bodies to locate their laboratories and offices on the Bentley and regional campuses offered prospects for new development.¹² In this respect, WAIT built upon policies to share its facilities with the general community. In the sporting arena, for example, this enabled construction of an international men's hockey stadium and an international squash centre. More immediately pressing, however, were needs to extend the Robertson Library, renew and maintain outdated equipment and erect a purpose-built chiller to improve air-conditioning capacity.¹³

Sponsorship from sources other than the Commonwealth appeared by 1979 to offer the main opportunity for improvement of WAIT finances. Commonwealth funding was not only limited, it was geared to the concept of a teaching institution with very restricted post-graduate and research activities. Since growth at WAIT in both these fields was substantial in the late 1970s, Commonwealth resistance to funding them in CAEs would serve as a persistent irritant during the 1980s.

Enrolment and Employment

Commonwealth policy, demographic factors, the recession, priorities accorded TAFE development, loss of public confidence in higher education, graduate unemployment, the over-supply of school teachers and reduced recruitment of graduates into government services—all these contributed to a marked slowing of enrolment growth at WAIT after 1975. In the social sciences, engineering and the applied sciences, student numbers actually fell. Numbers in business and management remained static as a consequence of expansion at Churchlands CAE, as planned. The one growth area was health sciences, which had developed to form the most comprehensive school of its type in Australia.

Despite the national trend of slowing enrolment in higher education, WAIT attracted no less than 41.6 per cent of first preference applicants for higher education in Western Australia in 1979, rising to nearly forty-six per cent in 1980. This compared (in 1980) with 30.4 per cent at UWA, 8.1 per cent at the new Murdoch University, and some sixteen per cent at the former teachers' colleges. As regards student quality WAIT and Murdoch University ranked just below UWA in average Tertiary Admissions Examination scores at entry.¹⁴

Most WAIT departments accepted a proportion of students with scores somewhat below the minimum standard of 270 points, depending on the pressure for places and the need to fill student quotas (which determined funding levels). For a period after 1975 particular schools—business and administration, mining and mineral technology, social sciences, and engineering and surveying—were obliged to accept larger proportions of such students than others. Competition for places was keenest in health sciences, with teacher education, applied science and the arts and design falling between the two extremes.

Over the period, WAIT's student profile shifted markedly upwards from its earlier concentration on associateship and diploma enrolments. Between 1976 and 1979, for example, the following trends were particularly notable: a twenty per cent rise at the post-graduate level; a 51.5 per cent fall at the diploma level; a 5.4 per cent rise in the proportion of WAIT students coming direct from school; and significant rises in the 'above forty' age bracket. About half of WAIT's students came from the east and south metropolitan area, with thirteen per cent from country areas, three per cent from interstate and three per cent from overseas. In 1979 about one third came from Perth's northern and western suburbs, the major catchment region for UWA.

At a time when youth and graduate unemployment had become a national concern, WAIT's power to attract such a high level of first preference students was attributed to its focus on vocational preparation. At WAIT part-time and external enrolments also catered to students already in the work-force. The overall enrolment trend nevertheless presented difficulties in areas where levels were stagnant or falling. For the first time in its short history WAIT was forced to confront such unpalatable issues as staff redundancy, early retirement and the lack of student demand for certain courses.

WAIT's vocational orientation gained significance as employment even among graduates became less plentiful. Regular surveys of job placements, which were introduced to review the situation annually, consistently recorded high levels of both placement and starting salaries for WAIT graduates. Graduate diploma courses, particularly in business, proved especially beneficial in opening opportunities for general arts and science graduates at both WAIT and the more traditional universities.

The Partridge Report

This situation assumed special significance in the context of the 1976 report of the Committee on Post-Secondary Education (Partridge), which became

known as the Partridge Report. The committee chairperson, P. H. Partridge, then professor of social philosophy at the Australian National University and a prominent commentator on tertiary education, was a traditionalist where university education was concerned. He had been critical of the way CAEs were overlapping fields and functions previously restricted to universities. The other academic member was Emeritus Professor N. S. Bayliss, originally from UWA, a pioneer member of the Australian Universities Commission and formerly chairperson of Murdoch University's Planning Board. Since the other two members were from the Education Department of Western Australia, the committee lacked any substantial voice from the advanced education sector and, especially, WAIT itself.

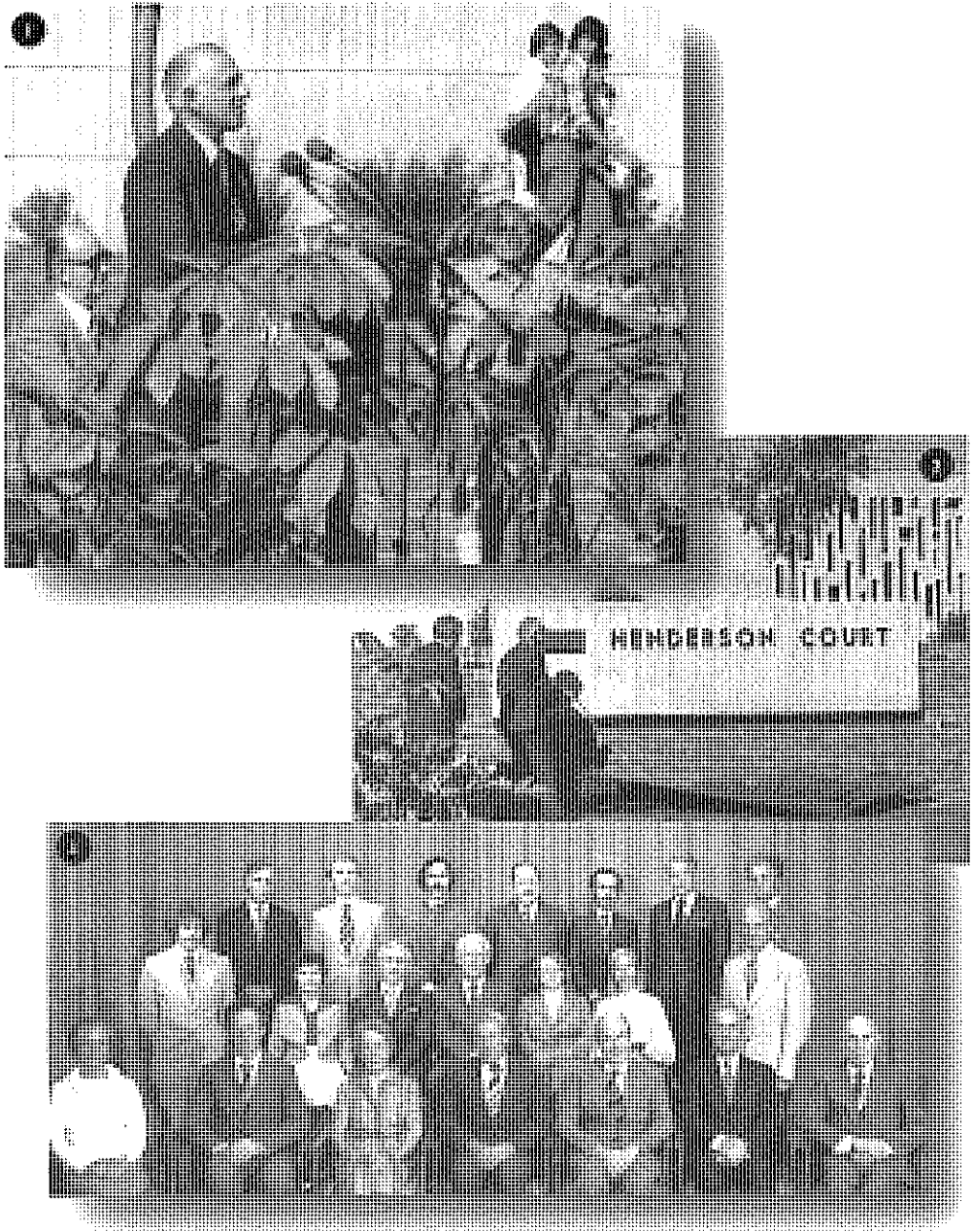
The committee unanimously endorsed the binary philosophy and argued against the upward drift of college activities into post-graduate and research work. It was particularly concerned about ensuring the continued growth of Murdoch University and the proposed WACAE, neither of which were economically viable at their current size.¹⁵ In these circumstances, the committee found no case for increasing the number of higher education institutions in Western Australia. A stronger measure of co-ordination also was advocated by replacing the WATEC by WAPSEC, a more broadly based and differently constituted post-secondary education commission.

WAIT received a resounding jolt from Partridge committee assessments of its role and development. Were WAIT to grow as planned to 15,000 students, this would prejudice potential growth at Murdoch University and the former teachers' colleges. It was proposed, therefore, that the institute return to a narrower base of technology and the applied sciences, and that its offerings in the humanities and social sciences be closely controlled.

Particular areas of concern included the appropriateness of teacher education and a proposed music programme at WAIT; the balance between degree and subgraduate work; and the relative roles of TAFE and WAIT at subgraduate course level. It was strongly recommended that WAPSEC, once formed, should review the growth rate of WAIT and carefully assess future needs in tertiary technological education.¹⁶

Determining the future of the School of Mines proved to be even more controversial. The committee concluded that in view of low staff morale, low student intakes and high unit costs, the school's higher education responsibilities should be transferred to the Bentley campus. Only there, it was argued, could a genuine centre of excellence in mining education be achieved, within the context of supporting applied science and technological departments. For Kalgoorlie the committee suggested the establishment of a community college by combining the existing TAFE college and residual facilities of the School of Mines. The subsequent political controversy dogged Kalgoorlie developments for years afterwards.

The critical new factor in Western Australia was the struggle for existence of Murdoch University. Indeed all the earlier fears of Dr Thomas Logan ('Blue') Robertson and Williams about the likely impact of a second university were



1 & 2 Roy Halliday Henderson at the unveiling of Henderson Court. He had recently retired after seven years as chairperson of the WAIT Council.
 3 WAIT Council members and observers *c.* 1978. *Back (left to right):* Don Grant, John Dolin, Merv Lynch, Dr K. Currie, Tom Silvan, (later Sir) James Cruthers, E. Barkley. *Middle:* student representative, Dorothy E. (Dot) Goodrick, Dr W. A. (Bill) Pullman, Mervyn Parry, G. M. Leavesley, Bridget Faye, Steve G. Forte. *Front:* Dorothy Robson, K. D. (Des) O'Sullivan, Erica R. Underwood, Justice Alan Barblett (chairperson), Dr Haydn Stanley Williams, Reginald C. Buckett, Frank W. Dawson.

now realised. The committee had little option now that Murdoch University existed, but to imply that UWA and WAIT would need to grow more slowly so that Murdoch University could widen its discipline base, particularly in the popular professional courses.

Committee views on the need for more rigorous co-ordination by the proposed WAPSEC strongly favoured the universities. Whereas the latter were considered to require only minimal oversight because of their 'traditional independence' and 'international standing', institutions such as WAIT, even though their status in national policy might in future change, should remain part of a closely controlled advanced education sector.¹⁷ The committee also wanted membership of WAPSEC to reflect community and government interests and specifically to exclude the executive heads of institutions, as was provided for in the existing WATEC.

Within WAIT's own councils the Partridge recommendations were greeted with disbelief and frustration. In the address to staff in February 1976, WAIT Director Williams gave vent to some of this feeling:

...it seems that the glory of the past that we were meeting the community needs has now become the sin of the present; we have grown too diverse, we need to make limits in certain fields...the fact is that we have already done this. We have initiated steps some years back to pause and look at this whole situation...there is an attempt to redefine our terms of reference, to use the historical interpretation of technology, rather than the philosophy on which this institution has built itself of the application of knowledge in all fields. Of course the answer is that this State is faced with a university and a series of teachers' colleges with which it does not know what to do...We are accused of creating problems for Murdoch and the teachers' colleges...We are in fact having real problems being created for us because of subsequent foundations that were not justified and some of us did not hesitate to say so at the time.¹⁸

Nevertheless he prevailed on institute staff to maintain a positive stance to WAIT's goals and achievements rather than become defensive and negative. Where Murdoch University was concerned he believed WAIT should adopt a generous view, emphasising that:

[Murdoch University's establishment and problems]...were not of its choosing. In effect the people who are there did not decide this; it was decided for them. It is not them we have to attack but the decision that was made at the time...We have to recognise the problems of Murdoch and the teachers' colleges but refute the responsibility of the Institute for these problems.¹⁹

WAIT's official response, released in July 1976, vigorously challenged the committee's assumptions.²⁰ First, the statement reaffirmed the institute's wider conception of technology which, it was held, conformed to its objectives under the WAIT Act, Commonwealth policies and overseas trends in higher education. Second, on the matter of balance between the hard and soft technologies, the response emphasised the need to examine WAIT in the context of developments in the three major institutions rather than as one of six CAEs. WAIT, it was argued, differed from the two universities no more than they differed from each other. Third, the response refuted implications that

WAIT had devoured programmes in a relentless pursuit of growth, pointing out that all its new courses were the outcome of specific Commonwealth or State directives, or of the WATEC initiatives; or of planned developments which had undergone close government scrutiny before approval and met clearly identified community needs. Special appendixes to the response dealt with initiatives in teacher education and executant music.

After reviewing all the alternatives with respect to the School of Mines, WAIT accepted the Partridge view that concentration of facilities at Bentley was desirable. It cost \$300,000 more to run the school as a two-campus operation than if mining education were moved to Bentley. If governments were nevertheless determined—on social, cultural or historical grounds—to retain the school at Kalgoorlie, then they should meet the extra costs involved. WAIT also concurred with the concept of establishing a broadly based community college at Kalgoorlie with close ties to WAIT.

Soon after the Partridge inquiry, the Court Government passed legislation to establish WAPSEC. The appointment of Dr Walter Neal as inaugural WAPSEC chairperson honoured WAIT's dean of teacher education, but deprived the institution of his valued services. Neal himself faced a very sensitive situation, since much of WAPSEC's agenda would impinge directly on WAIT's future: the performing arts; the School of Mines; the future organisation of teacher education and the TAFE system; and post-secondary education in the Pilbara.²¹ WAIT's science deans took specific issue with the membership of WAPSEC, which they criticised for lacking strengths in science and technology.²² For the next few years WAIT (along with other institutions) found itself inundated with WAPSEC policy pronouncements, as well as interventions which became increasingly bureaucratic in higher education generally.

Role Reassessments at WAIT: Legacies of Partridge

The Whitlam reforms, which lumped the large institutes of technology with the many former teachers' colleges, posed important problems for the former which clearly needed to be funded differently. Not only were they competing with universities for staff in professional and technology fields, but their laboratories, workshop and clinical experience programmes imposed a cost structure quite different from that in the newer colleges.

In April 1975 the major institutes of technology restructured the former meetings of chief executive officers into the DOCIT committee, with a view to emphasising their differences from the new CAEs. As a first priority DOCIT prepared a special case for retaining parity of academic salaries with universities.²³ Information exchanges between the DOCIT institutions on expenditures for plant, laboratories, clinical experience activity and small-class teaching also were important. On the initiative of WAIT, DOCIT conducted valuable nation-wide surveys of cost data and other operational information, besides organising conferences of senior planning and administrative personnel.

Parallels were drawn between the functions of DOCIT and the Australian Vice-Chancellors' Committee.

At WAIT itself the ASA initiated discussions about an issue that, in the context of national developments, was now almost inevitable. Should WAIT seek to become a university? Staff member Don Grant posed the question which then became a discussion document at the September 1974 WAIT Council meeting, and the subject of a public debate on campus in October.²⁴ After all, Murdoch University had recently been founded with a mission remarkably similar to WAIT's own,²⁵ as Murdoch University's inaugural vice-chancellor, Stephen Griew, effectively conceded in an address to WAIT graduates in 1973.²⁶

WAIT Director Williams dealt further with the university status issue in his address to staff in 1975. While conceding the blurring between the advanced education and university sectors, he argued strongly for WAIT to retain its special attributes of accessibility, diversity and community responsiveness. Transformation into a university might force WAIT to conform to community and staff perceptions of what a university ought to be rather than maintain its distinctive philosophy.²⁷

The subject continued to occupy centre stage in a seminar conducted at Yanchep among senior WAIT personnel, as one of the 10th anniversary activities held during 1977. For the Yanchep seminar WAIT invited a range of community leaders to provide critical assessments of its development, as a stimulus to policy debate at Bentley.²⁸ Among them, assessments by Peter Jones, the minister for education, and W. J. Brown, the director of the Labour Relations Division of the Confederation of Western Australian Industry, focused on responsiveness and accountability. Jones argued that WAIT's emergence as a degree-granting institution had taken it away from its original charter, which was to complement university functions in professional education and research. Brown criticised the phenomenon of 'credential creep', maintaining that both the universities and WAIT should reassess their relevance to the needs of private industry, since the majority of graduates found their way into 'safe and comfortable' public service positions.

Professor A. R. H. Cole's address was a biting critique of government policies. In his view not only was the establishment of Murdoch University a political exercise devoid of rationality, he also found little justification for WAIT's involvement in the humanities, social sciences and teacher education. His vision was of a WAIT concentrating on the applied sciences and technology to doctoral level, and dedicated to applied research and development, an area receiving increased attention in Commonwealth policy at the time. He queried, however, whether WAIT staff possessed the competence to teach and research at post-graduate levels.

Dr John de Laeter, at Yanchep and later in his 1978 Study Leave Report, concentrated on WAIT's deficiencies in research and development, and the applied sciences and technologies. In his 1978 report he advanced a detailed case for WAIT to become involved with the State government in the

establishment of a technology park along the lines of several he had visited in North America and Britain.²⁹ But this would not happen, he believed, until WAIT relinquished its role of simply training undergraduates for run-of-the-mill positions in industry—a situation rendering WAIT a ‘third-rate institution’ with second-rate staff performing unexciting and unexacting teaching tasks. To rectify this condition, he argued, WAIT needed to restore the primacy of applied science and technology; recruit highly qualified staff with research achievements, and reward them; and support research on an entrepreneurial basis.

Williams, however, was less sanguine. He believed that WAIT would progress into these fields when it was ready; the process could not be artificially forced. Moreover, he was aware of a rising antagonism to WAIT’s growing strength. WAIT nevertheless persisted in arguing for new courses, buildings, staff and students, while vigorously complaining about bureaucratic constraints imposed by Commonwealth and State authorities.³⁰

The Williams and Birt Reports

The findings of Professor Bruce Williams’ Commonwealth inquiry into education, released in the Williams Report in 1979, had significant implications for WAIT’s future. Among these, perhaps the most controversial was the view that since Murdoch University would find difficulty in achieving a viable size (assessed at about 4,000 students), its activities should be integrated with those of UWA.³¹ The Williams committee stopped short of advocating amalgamation, but that was the implication. The committee also argued that the former teachers’ colleges be amalgamated (as had been suggested in the Partridge Report) into a multi-campus WACAE. On advanced education, moreover, the Williams Report accepted the DOCIT argument that the major institutes of technology be accorded more independence and status than the other colleges. Staff in such institutes should also be able to compete with university staff for research grants.³²

Although this recommendation proposed a marked shift in Commonwealth policy, the committee drew back from accepting the financial and governance consequences. It was widely believed that university domination of such bodies as the Australian Science and Technology Council and the ARGC were responsible, along with Commonwealth financial austerity, for the timidity reflected in the Williams recommendations.

The Williams recommendation regarding Murdoch University created such a furore in Western Australian State government circles that Premier Court appointed Professor L. M. Birt, vice-chancellor of the University of Wollongong, to conduct an inquiry into its future.³³ He was assisted by I. H. (Jack) Carne (previously on the WAIT Council) and Neal. WAIT’s submission to the Birt committee recycled much of its response to the Partridge committee. Although co-operative ventures to assist Murdoch University were canvassed, the point was emphasised that transferring courses to the university would achieve nothing if students chose not to enrol there, or if such transfers caused

courses to lose purpose and integration in a comprehensive institution with a coherent philosophy.³⁴

On this issue, the Birt committee asked the question: 'Why should the work of two effective, well-established and highly regarded institutions, the University of Western Australia and WAIT, be hindered in order to assist another new institution to grow?' The committee nevertheless argued for growth at the two institutions to be slowed so as to assist Murdoch University; criticised WAIT's role in the social sciences and teacher education, as well as in post-graduate and research work; and proposed closer co-operation among Western Australia's tertiary institutions in Asian studies, mineral science, energy studies, psychology, marine science and external studies. In all the latter areas, WAIT had been a prominent leader.

The Birt Report effectively indicted government decisions to establish Murdoch University, although attributing this to a misreading of demographic trends. For Murdoch University too, there was some embarrassment about the fact that students preferred the more vocationally oriented courses at WAIT. The State government announced its response in December 1979: (1) the pegging of enrolment at UWA and WAIT, to totals agreed for 1981; (2) a study of possibilities for transferring Muresk to Murdoch University; (3) a study to investigate concentrating Asian language and cultural studies at Murdoch University; and (4) the possible transfer of preschool teacher education from WAIT to Murdoch University.³⁵

Staffing Policy

WAIT's role in higher education was inextricably connected to staffing policy. Three factors were prominent in generating controversies in the late 1970s. First was the conceding by the council of six weeks' leave to WAIT academic staff—a decision of the Labor State Government in 1975, favouring ex-teachers' college staff now in the advanced education sector.³⁶ Second was the formation of a Tertiary Education Academic Staff Association (TEASA) seeking registration as a union and access to the arbitration system.³⁷ A third factor was the work value study of academic salaries in advanced education undertaken by the Academic Salaries Tribunal (the Campbell inquiry) during 1975–6. The tribunal advocated establishing new grades with salary ranges for lecturers, senior lecturers, principal lecturers and heads of schools. It was particularly outspoken about the six weeks' leave issue in Western Australia, which was unique in the nation. In Campbell's view, college staff conditions lacked definition and rigorous criteria as compared with universities, and he recommended that salary levels be reassessed on merit and that staff establishments be approved by co-ordinating authorities.³⁸

Acceptance by the Commonwealth of Campbell's advice induced the ASA at WAIT, through TEASA, to present a log of claims to the Industrial Arbitration Court.³⁹ Since all institute funds came from Commonwealth sources, the WAIT Council opposed the claims, and its decision to suspend

promotion arrangements aggravated the situation.⁴⁰ Campbell's attack on the six weeks' leave entitlement nevertheless induced the ASA to accept a salaries and conditions award by mutual consent in December 1976.⁴¹ This traded four weeks' annual leave and a three-year probationary period for institute undertakings to extend study leave opportunities.

The intention was to extend schemes initiated in 1974 by Dr W. A. (Bill) Pullman, by allocating ten per cent of WAIT's salary bill to staff development.⁴² A staff development committee allocated funds on a competitive basis, a scheme that generated discontent among many staff unused to merit-based arrangements of this kind. They tended to focus their resentment upon Pullman as the assistant director responsible. In 1974 WAIT spent \$410,000 on staff development, with expectations that this would rise to 13.6 per cent of the total salaries bill by 1980.⁴³

Unfortunately all the best intentions went awry when, in 1977, the Commonwealth substantially reduced study leave entitlements.⁴⁴ The Campbell Report nevertheless raised ASA hopes about achieving a more liberal distribution of higher level appointments at the principal lecturer and professorial (Campbell classification: head of school) levels. Campbell, on the other hand, considered that the college higher level staffing profiles needed rationalisation and tighter academic justification.⁴⁵

After extended debate WAIT in 1977 introduced the post of principal lecturer for heads of departments, but suspended all promotions pending more detailed review of salary matters.⁴⁶ As WAIT Director Williams mentioned in his 1978 address to staff, the problem was to fund the appointments.⁴⁷ Funding difficulties and the decline of student enrolments in particular areas raised the spectre, for the first time in WAIT's short history, of staff redundancy and early retirement. Discussions on these issues between WAIT administrators and the ASA commenced late in the 1970s.⁴⁸

Over the period 1975–80, however, the originally cordial industrial relations climate at WAIT deteriorated. ASA leaders complained bitterly about the slow progress of industrial matters through the institute's committee system (in which the ASA was now widely represented). They also were ambivalent about research and higher degree criteria demanded for higher level posts, and opposed staff restructuring proposed by Pullman as a way to finance the proposed Campbell head of school appointments. These had been strongly supported by the ASA, which considered that WAIT had been less adventurous than many other institutions in advanced education. ASA President Warren Walker summed up his executive's feelings in 1976 when the promotions scheme was suspended: 'We possess an ungainly and unsympathetic management body whose aims are not entirely clear', he warned. 'We must take every means at our disposal to protect ourselves from indifference and rank injustice.'⁴⁹

In the overall context of WAIT's external and internal difficulties after 1975, perhaps the most infuriating Commonwealth decision was to set salaries of

college directors and principals at levels below those of university vice-chancellors. In Williams' case this put his salary, as head of a huge institution, below that of the vice-chancellor of Murdoch University, which barely matched in student numbers the size of a large WAIT school. Williams himself dismissed the matter as irrelevant. 'The community [neither] knows nor cares what I am paid', he reported to staff in 1978. 'They know me for what I am and for what I do and for what the Institute is and does.'⁵⁰ In 1977 Williams' point was proven when he was the recipient of the Western Australian Citizen of the Year award in the professions category, was awarded the CBE (Commander of the Order of the British Empire) for services to education in Australia, and was elected national president of the Australian College of Education.

Administrative Restructuring

Williams' initiatives coincided with and were influenced by the flood of external events after 1975. He made several important changes to the top management structure of WAIT. The most controversial decision was to recreate the post of deputy director.⁵¹ The selection of Pullman for the position generated some discontent because of his association with staffing policy as assistant director (academic), which had involved him in many contentious matters. These ranged from the promotions issues to the linking of staff budgeting around student:staff ratios, and even the processes of accreditation for WAIT degrees. Academic staff had not been accustomed to the rigorous documentation required for accreditation.⁵² Many of the factors adversely affecting attitudes towards Pullman were not of his making, however. He simply became the focal point of generalised dissatisfaction. In any event, the deans of schools, like the divisional directors before them, resented the loss of direct access to the director.

For Williams himself, the need was to monitor shifts in national and State policy and to adjust institute planning accordingly, as well as to represent WAIT on an ever-expanding range of off-campus councils and committees, and respond to a seemingly endless series of government inquiries. All these demanded a strengthening of administrative support for the director at the highest levels. The departure of Howard William Peters, in this connection, removed from WAIT the services of an experienced administrator with a flair for academic policy involvement. His successor, John Dolin, adopted a more traditional role in finance and administration.

The other two appointments in 1977 were less controversial. The post of assistant director (academic) was renamed assistant director (academic services) and the responsibilities reallocated. Dr Tom Kennedy from the Educational Development Unit was appointed to this new post. The Reverend Nicol Milne was moved to the position of academic registrar, responsible for counselling and allied services, the Academic Secretariat, and the Office of Admissions and Student Records. The other post created was that of planning officer, which was filled by Dr Stephen Hunter, a senior lecturer in the School of Teacher

Education. Hunter's role, which developed with time, was to revamp WAIT's planning processes to cope with the new pressures emerging after 1975.

Economic conditions had placed considerable strain on the newly introduced system of schools at WAIT, and the deans began to caucus prior to meetings of the Institute Planning and Resources Board to counterbalance what they perceived as an over-powerful administration. This was exacerbated by the rolling triennium process introduced after 1976, which did not allow time for the more leisurely consultation possible under triennial funding. A perception that WAIT's power structure was becoming skewed in favour of the central administration became an issue during 1978 when raised by Derek Holroyde, the then-embattled dean of the School of The Arts and Design.

Holroyde's challenge elicited a vigorous defence of central administration, based on comparative information about other DOCIT institutions as well as UWA.⁵³ A study by Peter Yacopetti claimed that WAIT lay to the least expensive end of the spectrum as regards central administrative staff, and the more expensive end in provision of academic support staff.

In fact DOCIT comparisons, if anything, placed WAIT at the more privileged end of institutions where administrative and related costs were concerned. Some of these figures are reported in Appendix 6. Other comparative figures for staff distribution confirmed WAIT's heavier weighting at the lower levels.

Williams himself dealt with the issue of central administration in his 1977 address to staff, which emphasised the greater degree of devolved responsibility applying at WAIT as compared with other Australian colleges.⁵⁴ But he warned about the need for a more responsible approach to institute financial affairs on the part of schools. Indeed he issued a stinging rebuke to the schools for their preparation of a case for financial support, lodged with the WATEC while he was overseas during 1976.

In the circumstances, communication in the large and complex organisation that WAIT had become assumed prime significance. Key issues needing resolution at the time included the revival of interdisciplinary contacts, rebuilding the sense of a WAIT community, preventing the erosion of service teaching in particular departments, and improving contacts between the director and academic staff generally. Another matter concerned the legitimacy of staff views as represented through the ASA, for a large proportion of the newer staff joining WAIT did not share the industrial culture of staff from the technical college tradition.

WAIT and the Community

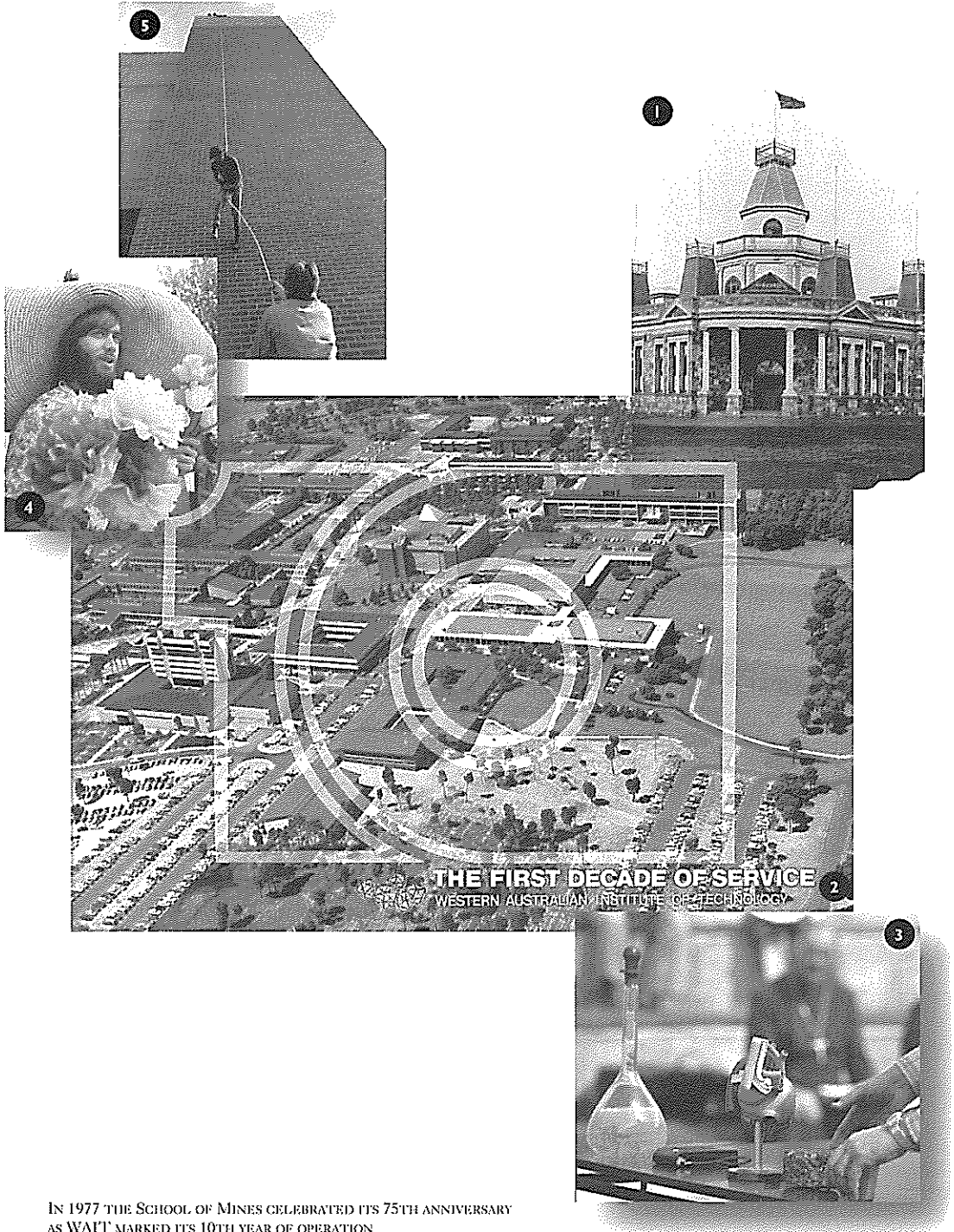
WAIT's greatest asset in resisting external criticism lay in its support from within the local community which, in turn, was actively encouraged to regard the institute as a resource dedicated to serving community needs. The theme of public participation indeed was the theme underpinning WAIT's celebrations on the occasion of its 10th anniversary in 1977.

During the year there were many significant events.⁵⁵ The School of Mines, for example, held festivities to celebrate its 75th anniversary. Graduation ceremony addresses by Under-Treasurer L. E. McCarrey; Managing Director of Newmont Pty Ltd R. Searles; and Social Sciences Dean Norman Francis Dufty—all focused on significant public policy issues. Professor G. Badger, chairperson of the recently established Australian Science and Technology Council, gave the inaugural address in a lecture series on science, technology and public policy. Conferences held at Bentley included the Third National Health Science Education Conference and the First National Conference on Radiotherapy Education. Also featured were the official openings of WAIT's new DEC System 10 computer and of stages 2 and 3 of the engineering complex, and the laying of a foundation stone for Rotary International House. These and other meetings and seminars served to highlight WAIT's roles in the applied sciences and technology. In November WAIT opened the remodelled Hayman Theatre, which had been redesigned by architect Peter Parkinson. The first production in these new premises was *Bartholomew Fair*, produced by Tony Nicholls.⁵⁶

WAIT's presence in community consciousness was considerably enhanced by the establishment of its campus radio station 6NR (New Radio) during 1976.⁵⁷ It started from the ideas of English lecturers Don Grant and E. (Duncan) Graham, and engineer J. Skevington, who took up Commonwealth proposals in 1975 to license community-based radio stations. Graham, formerly a presenter with the Australian Broadcasting Commission (ABC), foresaw opportunities to employ the station in media training for English and journalism students, and to give media access to Aboriginal groups, ethnic associations and women. The licence, granted in 1976, was renewed in 1978, but only after 6NR had undergone intense budgetary scrutiny. It survived because of WAIT's general philosophy underlining community involvement; because of active support from the director; and a realisation that the station, in a time of external attacks, was an outstanding vehicle for acquainting the public about WAIT's achievements.

E. (Duncan) Graham, after managing 6NR for a few years, was succeeded by Barbara Keyser and, later, Murray Green (who resigned to become manager of 6WF, the ABC's major station in Western Australia). Radio 6NR generally lived up to expectations, particularly for publicising the results of staff research and teaching. Chemistry Lecturer Gerard Leahy became a popular commentator on science. The station assisted cultural development among Aborigines, promoted Indian Ocean interests and provided practical experience for media students.

During the 10th anniversary WAIT also commenced publication of *Techné*, an annual report on research and development and community activities undertaken by WAIT academic staff. Originally the brainchild of de Laeter, *Techné* served to complement the work of WAIT-AID and acquaint the public of the wide range of activity among WAIT's staff.⁵⁸ The listings of research publications, reports and activities also helped counter criticisms of WAIT's



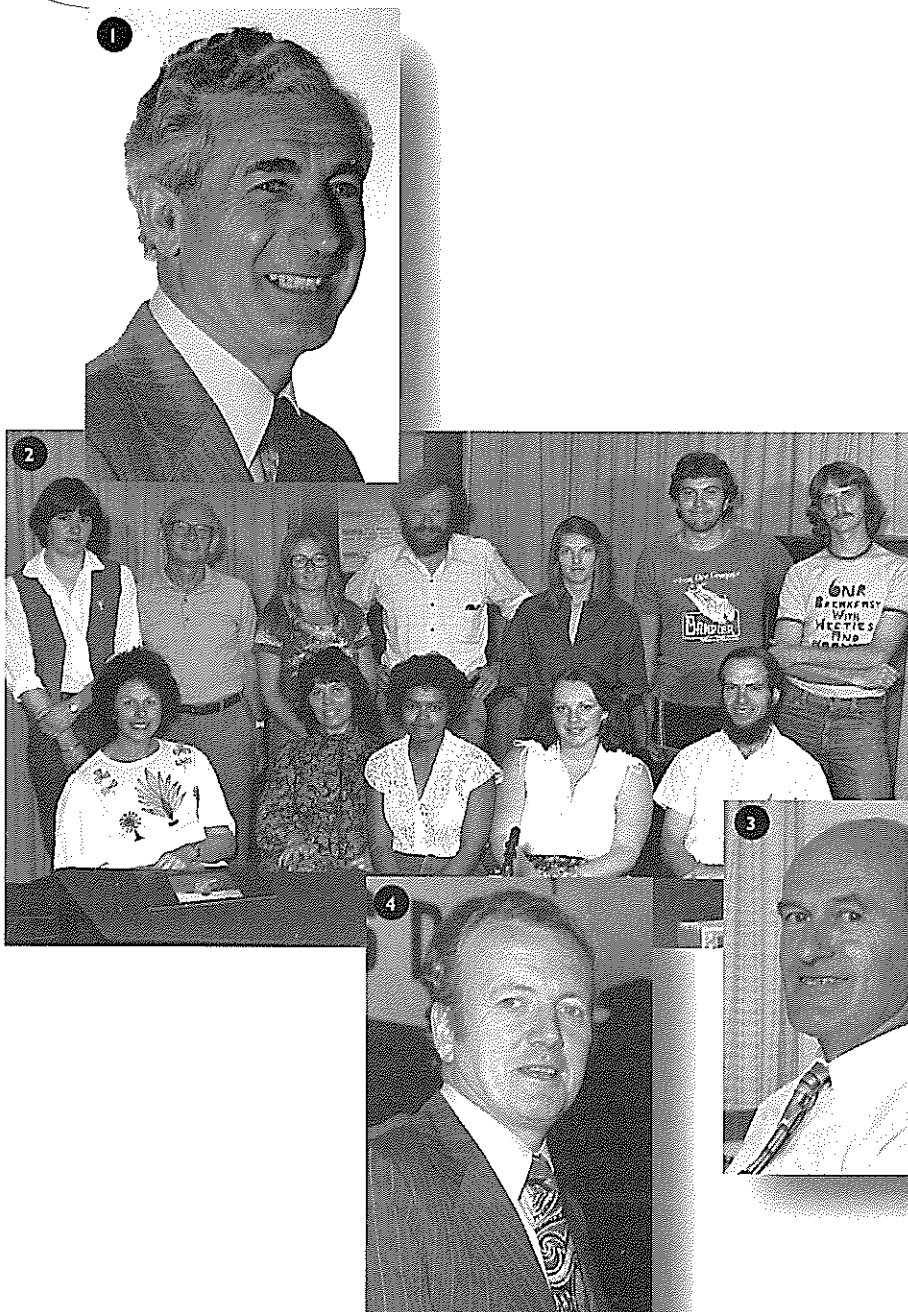
IN 1977 THE SCHOOL OF MINES CELEBRATED ITS 75TH ANNIVERSARY AS WAIT MARKED ITS 10TH YEAR OF OPERATION

1 The School of Mines started operating in this building in Coolgardie in 1902, moving shortly afterwards to Kalgoorlie.

2 Front cover of the commemorative brochure produced in 1977 for WAIT's 10th anniversary.

3, 4 & 5 WAIT's Open Day on 8 May 1977 started with a blessing by church leaders for the branches of learning; 'flower-power' and abseilers scaling the library were part of the festivities.

Overlay: The stylised '10' logo featured on many of WAIT's publications during the year.



1 Dr W. A. (Bill) Pullman joined WAIT as assistant director (academic), 1973, and later became deputy director (1976-80). He resigned to become chairperson of WAPSEC (1981-9).

2 Staff of Radio 6NR in the early 1980s. Inaugural station manager E. (Duncan) Graham is standing in the centre, and on his right, Barbara Keyser, who was to succeed him as manager. Other well-remembered names: Cliff Muhling and Grant Woodhams (*standing, second from left and far right*); Pieta O'Shaughnessy, Jean Westerhout, and Mary Wright (*seated, second, third and fourth from left*).

3 The Reverend Nicol Milne was appointed assistant director (educational services), 1972.

4 Dr Tom Kennedy became assistant director (academic services) in 1977.

research and development profile, which the Campbell Report of 1976 had done so much to publicise.

Assessing the acceptance of WAIT courses and qualifications in the community was another line of defence. Studies conducted by Dr Ken Hall, by the newly formed Alumni Association, and by Dr J. Currie from the School of Teacher Education—all confirmed a consistent picture: WAIT's courses and graduates were well accepted in competition with those from the universities; the institute had achieved a remarkable degree of penetration in the consciousness of school-leavers; and graduates were satisfied with the courses they had attended.⁵⁹

The opening of the international hockey stadium at WAIT in 1979 provided another opportunity to drive home WAIT's special relationship with the local community. This became an important feature of the State's sesquicentennial celebrations.

Turning Points in 1979

In the history of WAIT, 1979 stands out as a critical year. The central question was finding a replacement for WAIT Director Williams, who announced his intention to retire at the end of the year. In another development the State government accepted the findings of the Birt Report into the future of Murdoch University. The government also dealt with long-awaited amendments to the WAIT Act which were moved to strengthen its legislation affecting student guilds, and reviewed the membership and responsibilities of WAPSEC.⁶⁰

During 1979 the government asked the tertiary institutions for their views on the operation of the WAPSEC Act, a review which had been promised when the original legislation was passed in 1976.⁶¹ For WAIT the key issue was still the special status accorded the universities, although other matters raised involved the need for better representation on WAPSEC of the interests of higher education itself, and of the applied sciences and technologies. There was also criticism of the slowness of bureaucratic machinery now dominating the policy, financing and administration of tertiary education, both at State and Commonwealth levels.

In the amended Act of 1979 the Court Government dealt with at least some of these concerns: the WAPSEC membership was reduced from fifteen to twelve; the categorisation of membership by post-secondary education sectors (i.e. university, CAE, TAFE) was removed; and all tertiary institutions, including the universities, were encompassed by the co-ordinating responsibilities of the Act.⁶² Relevant amendments to the UWA Act and the WAIT Act were introduced, and the government also strengthened the principle of appointing members of the community as distinct from 'representatives' of the institutions, no more than four academic staff being permitted as members of WAPSEC. Considerable satisfaction greeted the appointment of de Laeter as one of these, to represent the interests of science and technology.⁶³

The depth of distrust between the institutions and WAPSEC was nevertheless apparent in parliamentary debates on the legislation. Neal's difficulties were probably inescapable given the financial circumstances of the period, although personal vilification by some Murdoch University academics at the time of the Birt inquiry went to extraordinary lengths.⁶⁴ The opposition spokesperson for education, Robert (Bob) Pearce, although advocating that WAPSEC membership should again include the executive heads of tertiary institutions, fully acknowledged that institutional 'hate' of WAPSEC arose from institutional desires for self-preservation in the prevailing financial climate. It also derived from frustration in dealing with the seemingly endless layers of bureaucracy now controlling Australian tertiary education.

At the institute-wide level a planning document identified several specific issues warranting careful attention: the encouragement of interdisciplinary goals through common first-year and common-core course structures, and extended opportunities for joint programmes, double majors and modular course arrangements; consolidation at the post-graduate diploma level (in view of Commonwealth opposition to developments at the masters degree levels); a concentration on productivity, efficiency and quality improvement in existing programmes rather than constant involvement in new ventures; and increasing flexibility through such areas as continuing education, external studies, and off-campus ventures in study centres or by way of course contracting.

On facilities and equipment, the planning statement foresaw that extensions to library services and accommodation would soon become critical, while demands on computing were expected to explode in response to the microcomputing revolution. On the capital side, while new ventures were expected to be marginal, priorities included science facilities at the School of Mines, a central chiller plant, stage 2 of the Robertson Library, an arts-media building and new facilities for the earth sciences.⁶⁵

WAIT faced the decade ahead with an entirely different perspective from that applying at the beginning of the 1970s. Demographic trends indicated the likelihood of only marginal increases in student demand for higher education, although continued expansion in business and management was anticipated. Action to deal with the emerging situation would require internal adjustments to the distribution of student quotas. In this respect, WAIT's comprehensiveness served as a valuable buffer against unpredictable shifts in student demand.

Selecting a Successor to Williams

One thing was certain: WAIT would enter the 1980s under the leadership of a new director. Towards the end of 1978 Williams informed the WAIT Council of his intention to retire as director at the end of 1979. In this he remained true to his statement to Wark in 1971 that he would leave WAIT at the end of about ten years, having achieved what he could contribute to the new institution. He timed the announcement so as to enable the council to plan carefully for the recruitment of his successor and to avoid an *interregnum* necessitating acting

appointments. This, Williams felt, was desirable at a time when WAIT could ill-afford to be without a permanent chief executive officer.

In reflecting on Williams' stewardship at WAIT, it is important to consider his personal qualities. Whether or not people agreed with Williams' ideas or even liked him personally, they invariably recognised in him a person of remarkable integrity. He embodied the best attributes of one whose firmly held religious convictions translated into the practical world of administration and leadership, in a post subjected to inevitable political, moral, industrial and interpersonal stresses. This took place over a period of nearly two decades in technical education and at WAIT. Williams possessed a profound sense of duty: to his family; to the community organisations to which he gave his allegiance; to the governments he served as a senior public servant; to the Institute of Technology he led from its inception; and to the system of advanced education he helped to create. Though he believed in protocol and formality, Williams also possessed a lively sense of humour and an infectious enthusiasm that produced strong loyalties among the majority of those who worked for or with him. In some circumstances he could appear aloof and distant, but he is remembered for an ability also to mix with people from all echelons within the institute.

Williams' Nonconformist upbringing and Wesleyan beliefs found expression in the driving tenacity of one for whom work never really ceased. Contemporaries describe with some awe his punishing work schedule that frequently began before breakfast with interstate and international telephone calls, and moved to early morning policy discussions with his senior administrators. Late into the evening and over weekends, he studied meeting agendas, maintained oversight of administrative detail, and punctiliously observed ceremonial and social duties of his position as director.

Coupled to his courtesy and an outwardly gentle demeanour, there existed a steely determination to promote, build and protect an institution which, in a real sense, had been of 'his' making. Whether or not people especially favoured his style, they all saw him as the 'father figure' at WAIT. He was absolutely dedicated to its interests, yet tempered by a loyalty to his own 'masters': the ministers for education at State and Commonwealth levels, and premiers and prime ministers. He could pursue unreservedly the values and programmes he believed right, sometimes in the face of considerable official opposition. Yet this was achieved within the 'rules' of public and private discourse. He seldom had cause to confront in public the ministers he served, yet on matters of principle Williams persisted against the odds on many occasions.

As academic and educationist, Dr Haydn Stanley Williams will find a significant niche in the history of Australian technical and higher education. Although from a remote State, he nevertheless profoundly influenced the philosophy of advanced education before it received official articulation in the Commonwealth arena, and then more particularly from within the CACAE in its earliest years. A forceful and well-read speaker, Williams regularly addressed public and professional meetings and was an honoured member of the

Australian College of Education, the Australian Institute of Management and other bodies.

On technical education, Williams shared an historic tradition that placed science and technology in the wider perspective of humanity that embraced knowledge in the service of mankind. This breadth of vision inevitably clashed—as it has traditionally—with the narrowly confined utilitarian values that in leaner economic periods have been forced upon technical education. For a director of a major institute of technology, Williams himself possessed a wider background than many of his contemporaries (at least in Western Australia) of education in the sciences, mathematics, social sciences and education. This complemented a wide knowledge and personal experience of higher education developments around the world, especially in Britain and Europe.

Williams translated this broad vision into a determination to see WAIT emerge as the archetypical CAE as described in the original Wark Report. In any event, he played a significant part in formulating the Wark committee's philosophy of advanced education, and especially the more liberal aspects of it. Well before that, in concert with Robertson, he had mapped out the design of a comprehensive tertiary institution incorporating high level courses in associated institutions—the School of Mines, for example—that would complement yet not stand inferior to UWA. Williams, with Robertson and his early leadership team, succeeded in turning local perceptions of WAIT, to project it as a genuine alternative to the traditional forms of university education.

In achieving this end the WAIT foundation staff under Williams' leadership adopted processes well honed in technical education to meet State needs in technology, the professions and the newer range of social science-based occupations. But they were fitted to the parameters of policy in tertiary education established under the binary system. Williams, on his own philosophical grounds as well as out of loyalty to the main policy mandates, willingly dedicated WAIT to the teaching of applied science, technology, art and design, and the social sciences, related to clearly identified employment needs in the local community. A pervading theme of service to the community underpinned the concept of WAIT as an institution, possessing resources provided by the taxpayer that should be available to the community in whatever directions were desirable and appropriate. In this, Williams and his staff perhaps benefited from an initial complacency at UWA, as it shifted its own academic emphasis more towards historic missions of universities, in conformity with government funding and policy imperatives. The university in fact had started from a philosophical base hardly distinguishable from that underpinning WAIT in the late 1960s.

On institutional roles and interrelationships, Williams was perhaps less comfortable with trends in advanced education during the later 1970s, which brought them closer in function to the form and substance of university education. He courted some unpopularity within his own staff by resisting the

extension of professional courses into a fourth undergraduate year. Similarly he solidly backed WAIT's continuing role at the associate diploma level. But he also promoted enthusiastically WAIT's transformation into a degree-granting institution and indeed was an inaugural member of the Australian Council on Awards in Advanced Education. WAIT's rapid progress at the bachelor degree and, later, post-graduate levels generated tensions between official and institutional perceptions of the role of advanced education that can be discerned in Williams' own ambivalence concerning trends in the 1970s. Better than most he understood the level of Commonwealth government and State government resistance to status aspirations in the advanced education sector.

Even so, Williams' comprehension of political and economic realities subsequent to the Whitlam reform of Australian higher education led him to promote vigorously the formation of the DOCIT conference. This represented institutions conforming most closely to the original concept of advanced education, which were genuine alternatives to the universities. The newer colleges, for the most part, were former teachers' colleges that, in Williams' view, occupied a different stratum which would dilute official support for the mainstream institutes of technology.

Williams found himself under some attack late in the 1970s from his most ambitious staff, for appearing to delay the progress of potential research and development roles for WAIT. From the viewpoint of WAIT's scientists and technologists he was seen to favour the arts and social sciences, rather than assert the primacy of institute roles in the 'harder' disciplines and professional areas. They believed too, that he lacked an understanding of—perhaps even opposed—the industrial and technological research and development role underpinning the original concept of WAIT-AID. Whether this assessment is fair, is perhaps a different matter. Williams' response emphasised that WAIT would progress into research and development when it was ready. It should not be artificially forced beyond its capabilities. A broader vision of technology also was essential to his philosophy of WAIT. University status too, carried the possible danger of WAIT losing the very institutional characteristics on which its community support base was founded. Status and research visions, moreover, needed to be tempered by an appreciation of the very real opposition to WAIT's tremendous growth that surfaced in government circles after 1975.

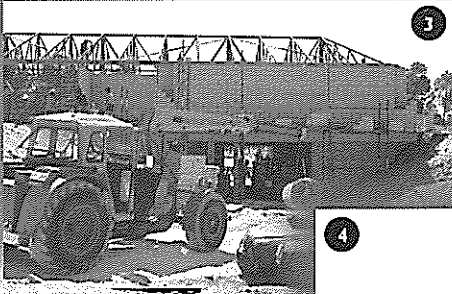
Whatever else he may have achieved, Williams proved to be one of Australia's most astute politicians where WAIT and the wider world of advanced education were concerned. At the local level he belonged to a select band of public servants in education and other fields who knew each other well, shared similar school and university backgrounds (with the Perth Modern School prominent), constantly interacted in State committees and boards, and even shared religious, family and professional association ties. In that tightly contained society of Western Australia, they knew personally and were respected by the leading politicians of the day, from whichever party. Robertson, in this connection, opened many doors to Williams.

Williams enjoyed an outstanding reputation with both Commonwealth and State politicians, bureaucrats and co-ordinating authorities. State ministers for education, who persisted in a view that Williams had been 'seconded' over to WAIT, marvelled at his financial management and ability to capture resources for WAIT. At Commonwealth level his sweeping knowledge of advanced education and the bureaucratic infrastructure won considerable respect, and especially since he worked within the bounds of protocol and propriety. Williams, in this connection, learned well from his mentor, Robertson, that much could be achieved through personal contacts and persuasion rather than through confrontation and abrasive assertions of autonomy. A well-established base of administration and planning also was an essential aspect of Williams' successes.

This perhaps comfortable environment changed irrevocably once the Commonwealth assumed total responsibility for Australian higher education. The centre of political power shifted to Canberra and an administrative machine especially remote from Western Australia. Relationships between ministers and senior professionals in the public service and major institutions also changed, as political intervention in Australian education became more prevalent. Williams indeed may have chosen a prudent time to retire, for a different style of political operating may well have been necessary.

Williams' reputation stood on a firm base of planning, management and administration that owed much, as he acknowledged publicly, to Robertson's example in the Education Department. It also stemmed from Williams' own appreciation of deficiencies in the Technical Education Division, out of which WAIT was born. In any event, Williams created at WAIT a highly professional planning and administrative machine that served WAIT well in its dealings with governments. The results were twofold: WAIT invariably received generous support from State governments and Commonwealth governments; and, even during the building boom of 1973-5, WAIT completed projects on time and within budget. Whenever money was available WAIT had detailed plans ready to exploit opportunities and persuade government and State Treasury officials. In all this, Williams headed a team of talented assistant directors, and an administration headed by Peters but flanked by the statistician, L. M. (Peter) Croy; the accountant, R. C. (Rod) Pope; the services manager, Howard ('Topper') Girvan-Brown; architects Vin Davies and, later, J. S. (Jack) Finney; and such other administration staff as Peter Yacopetti, P. E. Hobbs, Stan Perry, Paul Main, Malcolm Cunningham and R. J. (Bob) Gardiner.

Many academics resented the power enjoyed by the senior managers and administrators at WAIT, even though Williams took pains to ensure wide consultation throughout the institute's governance structures. In the longer term view this structure enabled WAIT to establish an unparalleled base of capital investment and academic staff, from which adjustments could later be made. Many academic staff in WAIT's early developmental stages were relatively inexperienced in higher education, lacking in higher level academic



WAIT'S INTERNATIONAL STANDARD HOCKEY STADIUM WAS FUNDED BY THE STATE'S HOCKEY ASSOCIATIONS AND A SESQUICENTENNIAL GIFT TO WA FROM THE COMMONWEALTH

1 The field was laid with synthetic 'astro-turf', the first of its kind in the southern hemisphere.

2 Dignitaries at the opening in April 1979 included Premier Charles Court (*left*), WAIT Council Chairperson Justice Alan Barblett (*fourth from left, at rear*) and Prime Minister Malcom Fraser (*centre*) who opened the stadium.

3 The grandstand under construction.

4 The stadium attracted international hockey events to WAIT.

qualifications, and infused with an older technical education culture that took some years to modify. The reorganisation into schools between 1973 and 1975 attempted to distribute more widely the exercise of authority, and to boost somewhat the influence of academic initiative. But it failed to cope with the post-1975 political and financial environment; nor did it encourage schools to work together in the interests of WAIT as a whole.

Williams fully comprehended that the halcyon period of WAIT's growth was over by 1975, but his outspoken warnings fell on the ears of staff still hungry for growth and change. At this point WAIT became a difficult institution to manage and it lost the genius of Peters in administration. Perhaps the institution and external conditions had grown beyond the special gifts of Peters. It was one thing to be creative and innovative in the advantageous financial climate till 1975; quite another to function in the subsequent period, demanding the skill and diplomacy to curb expectations.

If Williams had a particular blind spot, it was in connection with the post of deputy director. None of the academic leaders wanted to lose their direct access to the director, either in Coombe's time or that of Pullman. The position, whatever the need for it, distanced the director from his academic leaders and staff, and became the focal point of academics' frustrations with the WAIT decision-making processes and administration. These were perhaps inevitable anyway, given the changed financial environment in WAIT's finances and external relations after 1975.

Williams astutely handled the external difficulties of that period, even though a number of leading academic staff wanted a more aggressive response. In any event, the positive presentation of WAIT's case for retaining its distinctive roles in Western Australian higher education won out against the seemingly endless series of criticisms voiced in the Partridge and Birt inquiries and, in particular, university circles. The essential battles were virtually over by the time Williams retired in December 1979, although they left a legacy that dogged WAIT in the 1980s. Even within this difficult period WAIT, under Williams as director, won several battles for resources (for example, in construction of buildings for the applied sciences and the health sciences, and for new computing facilities) and for the nation's first degree course for nurses.

Throughout WAIT's period of establishment and growth, Williams consistently championed the cause of student participation at WAIT. Even when his patience was stretched by the activities of extremely radical Student Guild executives, he used his powerful influence to back the Student Guild on almost every major policy matter that concerned student welfare and interests. This continued in the face of a political backlash after 1975, regarding student unions. Williams' influence was critical in the Guild House project, which excited considerable scepticism among authorities concerned with financing it. WAIT, under Williams, also took an extremely liberal view of student representation on all its key management and academic bodies.

The WAIT Council honoured its first director by establishing the Haydn Williams Fellowships. These were intended, over a period of at least twenty-five

years, to finance scholars of international standing to teach at WAIT on themes associated with 'Education and the Community'. To fund the scheme, the WAIT Council set aside \$200,000—almost half the target sum required—and approached sponsors to raise the balance. When launched in March 1980, the scheme already had attracted \$20,000 in donations from Alcoa, the Rural and Industries Bank and TVW Channel 7. In July Westralian Farmers' Co-operative Ltd added its name to the donors' list. Later, the council also conferred on Williams an honorary doctorate of technology.

The WAIT Council began the process of finding a successor to Williams in August 1978. A search committee, drawn from across the campus and the community, was formed, while the ASA conducted a survey to elicit staff opinions. By February 1979 the field of applicants had been narrowed to twenty-three, which was reduced in March to fourteen. Subsequently interviews were arranged—in which the Student Guild played a part—to reduce the short list to four candidates. For these four, a rigorous schedule of on-campus meetings with staff and students as well as a public address was organised.⁶⁶

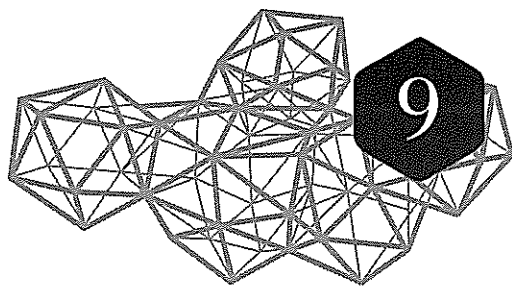
The short list included Dr W. A. (Bill) Pullman, Dr Peter Tannock, Professor A. Kerr and Dr Don Watts. Watts had been invited to apply late in the process, following advice from Sir Lawrence Jackson, then chancellor of UWA.⁶⁷ Staff and students followed with intense interest the progress of each candidate during their days at WAIT, with the public addresses conducted before packed audiences and followed by a barrage of questions.

Among the candidates Watts was clearly identified as the most dynamic performer, and one who had both informed himself about major concerns of staff, and examined closely the purposes, structure and potential of the Institute of Technology. Pullman was probably unfortunate in having been associated with many contentious staffing matters that had generated resentments among academics. The ASA survey in this context was viewed by many as undermining his candidature. Watts, by comparison, had been irrepressibly enthusiastic in meetings with staff and students, committed to the advancement of science and technology, and was extraordinarily well known in scientific, educational and local community circles. The unanimous choice of council members, Watts joined WAIT on 1 January 1980.



1 WAIT's osw director, Dr Don Watts (*right*), at an informal gathering to meet buildings and maintenance staff. *Left to right*: Howard ("Topper") Girvan-Brown, Marion Bailey, Joe Blackwell, Eric Pallier, Alex Martin, Elwood Smith, Bill Buckingham.

2 Shades of The Beatles' *Abbey Road* album. Titled *Hayman Road NE27*, the Student Guild's 1970 orientation brochure cover featured (*left to right*) WAIT student Kim Throssel, Student Guild President Theo Naarstig, Institute Secretary Howard William Peters and WAIT Director Dr Haydn Stanley Williams.



Watts at WAIT: Restructuring for Change

New Director

Born in Perth in April 1934 and educated at Hale School, Dr Don Watts possessed an outstanding record of university achievement in chemistry. He had completed both honours and PhD studies at UWA before obtaining three years of post-doctoral experience at University College, London. Returning to UWA's Department of Physical and Inorganic Chemistry as a senior lecturer, he received the signal honour of appointment to a personal Chair of Chemistry in 1977.

Watts was a prominent and successful sportsman, having represented Western Australia in tennis (1952 and 1953) and in squash racquets (1957–66). In tennis he had coached at club and State levels and served as president of the Royal King's Park Tennis Club in 1964–5. A member of the Lake Karrinyup Country Club, Watts was a keen golfer who enjoyed a reputation as 'the mad professor', caddying for neighbour Graham Marsh in the British Open and other major tournaments.

In temperament, where his predecessor Williams had been quiet and formal, Watts was boisterous and convivial, confident, assertive and indeed confrontationalist when necessary. He was larger-than-life, a well-informed, confident and entertaining speaker and a legendary workaholic. Assisted by his wife Michelle, Watts also found time to enjoy social contacts with people from all walks of life and to mix well with students. He appeared to know the names of staff members from across the spectrum at WAIT and the work that they did, and he took time to contact personally those who made contributions to institutional development. While at ease in the most exalted circles, Watts also possessed a disconcertingly coarse sense of humour that, while sometimes offensive to those accustomed to more formal protocol, appealed to many Australians on his staff.

While at UWA, Watts had developed strongly held views on higher education management. Two of them proved later to be especially significant: devolution of academic leadership needed to be matched by accountability for the allocation of financial resources; and decision-making mechanisms needed to remain flexible. Watts also believed a senior management team of no more than about nine people was optimal. This implied an institution organised around a small number of major units, with the leaders of these units accorded enhanced budgetary authority and responsibility. He was critical of the practice at UWA whereby academic initiatives were decentralised but budget controls exercised centrally.¹

On one theme Watts was adamant: research and development were essential to the reputation and role of an institute of technology and to the revival of Australia's economy. In this respect, he believed, national policy did not make effective use of its major institutes of technology. Watts passionately believed in this mission for WAIT. More importantly he possessed the contacts in politics, industry, science, technology and sport to open doors into company boardrooms, community organisations and political parties. Watts brought to WAIT an entrepreneurial flair and understanding of research and technology that eventually established him as a national figure. Ideas cascaded from him—some half-baked, but many positively exciting. He fearlessly pursued anyone who might further his cause, following up on the slightest opportunity presented on any occasion.

In the context of the time, Watts' appointment proved to be a master stroke. Before coming to WAIT he had never administered even a university department, yet in a very short period he made a spectacular impact on Australian higher education. Despite early mistakes and misjudgements, he proved able to create incentives that lifted the sights of many WAIT staff beyond a future devoted solely to teaching. He quickly moved people of recognised ability into the centre of institute affairs, pushing others aside. Watts envisaged WAIT, perhaps arrogantly, as becoming the powerhouse behind the production of a professional work-force and of industry research for Western Australia; achieving recognition as the most outstanding institution of its kind in Australia; and gaining an international reputation. His agenda for change at WAIT embraced several interlocking elements:

1. the vigorous promotion of research and development;
2. the building of new bridges to local industry and the reassertion of science and technology as the foundation of WAIT's academic mission;
3. the search for better funding arrangements to enable WAIT to realise its potential, including the fostering of entrepreneurial ventures with private industry and government;
4. the reorganisation of management structures to promote academic leadership, responsibility, flexibility and accountability;
5. the introduction of a promotions scheme to reward and motivate excellent staff; and

6. the reorganisation of WAIT's teaching resources to achieve these ends while maximising cost savings through service teaching, minimising expenditures on small classes, and the employment of more junior level tutor-demonstrator staff.

Fundamental to achievement of these objectives was the restructuring of WAIT government, administration, staffing policies and external relations. This involved shifting WAIT and its academic staff beyond the culture of advanced education encapsulated in the binary philosophy of the Commonwealth government and the State government toward higher education. The present chapter deals with the restructuring process; in Chapter 10, attention focuses on the remarkable expansion of research and development at WAIT during the early 1980s. Ultimately this led to challenges to the binary structure of higher education itself, which is dealt with in chapters 11 and 12.

The Restructuring Process

On taking up office at WAIT, Watts immediately initiated discussions about reorganising WAIT's structure, starting with a meeting of deans and assistant directors at Muresk in February 1980. Detailed documents on the question of reorganisation were then examined by all the relevant committees and the WAIT Council, until finally accepted in October.² The 1981 budget, passed in November, was based on the restructuring which was driven by six fundamental objectives:

1. strengthen the teaching, research, community service and academic decision-making capabilities of departments;
2. provide greater decision-making powers for departments;
3. streamline the committee system and decision-making process, particularly in regard to course approvals;
4. improve the nature of overall central administrative and academic services to the academic sector;
5. place greater emphasis on the personal responsibilities of staff to make decisions, currently diffused by the committee system; and
6. give formal recognition to the place of applied, community-oriented research and provide a formal structure to catalyse interdisciplinary activity—the basis of applied research and development.

Six other related aims focused on strengthening the community service orientation of WAIT, freeing up staff structures, promoting a more open academic climate in which staff could better control policy in departments, and rewarding staff for academic excellence.

Detailed corporate planning exercises, over the following two years, spelt out the institutional mission in ways that ultimately conformed to a statement issued in June 1982 by the DOCIT institutions but which fitted the WAIT circumstances.³ Typically Watts wasted no time in conveying this to the minister for education, James G. Clarko, as part of a two-year programme:

...to establish WAIT as a unique institution in Australia through a strong drive to become closer to commerce and industry and respond more effectively to evolving needs of Western Australian industry.

He also made the point:

You are no doubt aware that to be different is not easy in education and to be different within the drive for sameness which evolves is even more difficult...WAIT must never aspire to be a university but it must aspire to do some things which have been irrationally assigned to the licence of universities only.⁴

At the same time as this was happening WAIT was heavily involved in developing closer relationships with local industry. Negotiations to establish a technology park, described in Chapter 10, were fundamental to the task. In February 1981 a public seminar 'WAIT and its External Community' had a similar object. Margaret Chisholm, a consultant on institutional promotion who was on a private visit to Perth, was commissioned to produce a report on the public projection of WAIT.⁵

Discussions about a new structure for WAIT narrowed to an organisation comprising four major academic divisions. Divisions of health sciences, and business and administration posed few difficulties. They were virtually the old schools in another form. The applied sciences, engineering, architecture, the social sciences, education, the arts and design, and the School of Mines demanded more careful consideration.

Watts himself wanted to join together the applied sciences to engineering and surveying and mapping. The objective was to bring the major science and technology fields together under Dr John de Laeter, thus marrying the entrepreneurial drive in the sciences to the equipment and staff resources in engineering. The engineering departments vigorously opposed this proposal, convinced it would undermine the school's professional identity and financial independence. Watts' will nevertheless prevailed and the Division of Engineering and Science became the third division in the new WAIT structure.⁶

As for the arts and design, education and social sciences, discussions were more controversial. At the time, Watts proposed joining education and social sciences, but the idea was opposed by both parties. Education's defence focused on its size, professional identity and unique internal structures. The social sciences were fearful of being swamped by education and being identified as 'service' departments rather than discrete academic entities. It was initially proposed that the arts and design should remain as a separate division. All three schools were ultimately placed into a fourth division, the Division of Arts, Education and Social Sciences, under the leadership of Dr Norman Francis Dufty.

Use of the term 'division' had not originally been intended. Watts had proposed 'faculties', with constituent schools and departments. In the final decisions, however, departments were renamed 'schools', some were grouped as appropriate into 'faculties', and these together comprised the structure of divisions. Faculty status resolved residual problems of identification for the

schools of engineering and education. As time passed, criteria were developed to describe and justify the appellations 'department', 'school' and 'faculty' to ensure a measure of consistency across the divisions.

To provide a focus for research and development, Watts originally proposed that each division should establish a major research and development 'centre', drawing its funds from external sources. With de Laeter, he suggested a Centre for Science and Technology in the Division of Engineering and Science. In the Division of Health Sciences Dr Marc Liveris and Watts envisaged building a centre based on a substantial grant from the Kellogg Foundation. A centre for the Division of Business and Administration appeared to present few difficulties. The situation in arts, education and social sciences was rather different, since there already were small centres functioning in architecture and a number of other schools. Such elements as Radio 6NR, media services, the theatre and the art collection fitted neither the academic nor the administrative structures, yet occupied sensitive positions in WAIT's external relationships. Eventually the idea emerged of creating a Centre for Communication and The Arts, under Derek Holroyde, associated with the Division of Academic Affairs and having a close affinity to the Division of Arts, Education and Social Sciences.⁷

With respect to research, budget planning under the new system provided for divisions to surrender two per cent of their funds to provide money for a director's discretionary reserve. The sum involved (\$240,000 in 1981) was intended to support identified research and development projects, innovations and staff promotions. Divisions were expected to match grants from the reserve funds and after a period assume complete financial responsibility.⁸

Within the new structure Watts' intention was to devolve budgetary responsibility to the divisions, each of which would receive what became known as 'buckets of money' to be allocated by divisional heads and boards, according to their perceptions of advantage and need. Budgetary devolution had the associated objective of promoting flexibility within large divisions with respect to staff management. To facilitate devolution, however, administrative personnel would need to be redistributed from the centre to divisions; central roles and functions would need redrawing; and new monitoring procedures would need to be introduced.

On the administrative side, the Division of Administration and Finance retained most of its key functions under the previous structure. The Division of Academic Services (later renamed Academic Affairs), however, underwent close scrutiny. Watts had in mind the redeployment of staff and functions from the counselling and health services, the Educational Development Unit, external studies, the Educational Media Centre and the planning task force. The Robertson Library and the Computer Centre were to remain as central responsibilities, with services charged to divisions on a 'user pays' basis.

The restructuring of central administration involved one controversial feature: abolition of the post of deputy director. Watts was determined to deal direct with his divisional heads—called associate directors—in spite of the inroads on his time this measure involved. To handle week-to-week operations

between the divisions, Watts and his assistant directors held regular Monday morning meetings, forming a group that became nicknamed 'Dad's Army' from the initials of the expression 'Meetings of the Director and Associate Directors'.

Dr W. A. (Bill) Pullman, already bitterly disappointed at failing to win the director's post, was now relegated to a position equivalent in status to the other associate directors. Moreover, he and Watts found it impossible to work with each other. Pullman eventually solved the problem by taking up a visiting fellowship at the University of New England in 1981, and then resigning to accept appointment as Dr Walter Neal's successor as chairperson of WAPSEC. This appointment, in turn, of course only precipitated new clashes with Watts.

The broad restructuring elements having been decided, the next priority was to streamline the institute's committee structure to reduce work and improve efficiency. Boards of study remained in place, but school boards were replaced by divisional boards as the key decision-making bodies. These boards assumed responsibility for course matters, with the courses committee of the Academic Board being abolished. A small group in the central administration was to oversee accreditation matters to ensure that course submissions accorded with government requirements. However, Watts intended that WAIT should gain more autonomy with respect to accreditation, which had become a long-winded and expensive process. Holroyde accepted with some misgivings the headship of a Centre for Communication and The Arts, having formed the opinion that Watts had little sympathy for the arts.

Considerable movement among senior WAIT staff during 1980 and 1981, while reflecting some dissatisfaction with the new arrangements, nevertheless cleared the way for necessary adjustments. De Laeter, Liveris, Dufty and Dr Ken Hall were appointed as the inaugural associate directors. Dr A. H. (Harry) Nash remained as dean of engineering until the resignation of Pullman in 1981, at which time he became acting assistant director (academic affairs) until his retirement in 1982. Dr John Sharpham joined WAIT in 1983 as the new associate director (academic affairs). In 1981 the resignation of Dr Leo Foster as dean of education (to take up the post of director of the Phillip Institute of Technology) resolved leadership problems in the Division of Arts, Education and Social Sciences. Holroyde, as mentioned, moved to the post of director of the Centre for Communication and The Arts, although retaining a continuing academic involvement in the Division of Arts, Education and Social Sciences. In the central administration Dr Tom Kennedy also resigned to take up the post as deputy director of the Caulfield Institute of Technology, while The Reverend Nicol Milne resigned his position following substantial reforms by Watts to the Academic Registrar's Office.

The retirements and resignations opened possibilities to find replacements at lower salary levels and to redefine responsibilities. A new principle which was accepted under the restructuring was that leadership posts should be for a limited term and renewable after review of performance. Watts did not believe that such positions should be elective, although he introduced a system of 'appropriate consultation' among staff before making appointments.

WAIT Council

While most of the restructuring concerned internal organisation, the role of the council was crucial to Watts' plans. He had the complete confidence of the council's chairperson Justice Alan Barblett, who was a personal friend, and the two formed a powerful team until Barblett eventually finished his nine-year term in the chair in 1984. Although exhausted by Watts' energy, Barblett was able to smooth over some of the political and bureaucratic storms generated by Watts during the 1980s.⁹

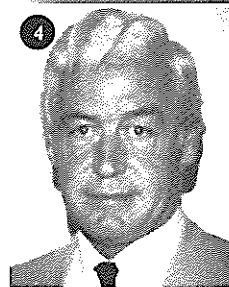
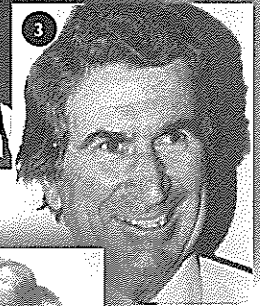
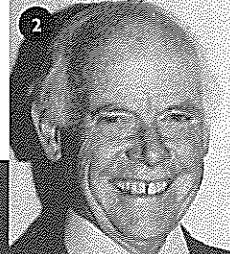
The government appointees in 1980 included Erica R. Underwood, Sir James Cruthers, Bridget Faye and K. D. (Des) O'Sullivan—all continuing from earlier appointments.¹⁰ New arrivals included Wilfred Ewers, Ben R. Scott and Dr Ken Carruthers. Ewers, officer-in-charge of the CSIRO's Western Australian Laboratory of the Division of Mineralogy and a chemistry graduate, who in 1973 and 1974 had held the post of president of the Royal Australian Chemical Institute, was the very sort of external member sought by Watts; so too was Scott, a former manager of Australian Paper Manufacturers Ltd and currently education liaison officer for the Confederation of Western Australian Industry, who was vitally interested in education–industry relationships. Another new member was John B. Horgan, the managing director of Metro Industries, member of the Metropolitan Regional Planning Authority and of the Manufacturing Industry Council of the Confederation of Western Australian Industry.¹¹ Watts also received considerable help with respect to the external private sector people from Premier of Western Australia Charles Court.

Among those retiring from council, none had given longer or more dedicated service than Frank W. Dawson, a key member of the capital works committee. Scott, replaced by Horgan, was appointed to the WAPSEC council in 1981.¹² Bridget Faye was succeeded by Margot Lang, a senior journalist with *The West Australian*.

Ex-officio members included Peter Forrest, the assistant director of technical education. However, in the wake of internecine departmental struggles over control of technical education, his place as nominee of the director-general went to John Greenway.¹³ This was regretted, since Forrest's participation in decisions about the School of Mines and a joint operation with the Technical Education Division at Collie were at a sensitive point. Forrest returned to the council in 1983.

Co-opted membership reflected Watts' preference for private sector people as well as particular sectional interests. Reginald C. Buckett, for example, was asked to remain until the future of the School of Mines had been determined. Dr Judith Henzell (representing health), John (Jock) Morrison (Boans Ltd, the accounting profession and the Perth Chamber of Commerce) and John K. Duncan (architecture profession)—all were prominent in commerce and the professions. Duncan replaced Mervyn Parry, who had served the council since the early 1970s.

Although the ASA, the Student Guild and the Salaried Officers' Association were permitted only observer status, the elected staff members on council



WAIT COUNCIL MEMBERS APPOINTED IN THE EARLY 1980S

REPRESENTED A RANGE OF INTERESTS

1 Dr Judith Henzell (health)

2 Wilfred Ewers (industrial science)

3 John K. Duncan (professions)

4 John (Jock) Morrison (business)

5 Margot Lang (media)

6 John B. Horgan (industry)

7 Graduation ceremony in 1982. Former premier Sir Charles Court standing to receive WAIT's highest award, an honorary doctorate of technology, with long-time friend Dr Erica R. Underwood (*back to camera*) officiating and Director Dr Don Watts at the podium.

invariably came from these bodies. This raised a matter of principle with Watts, who held that the associations represented only a segment of the respective constituencies. This was resolved by the council continuing the practice of inviting the Student Guild and ASA presidents to attend as observers, but to regard the presidents, if also the elected member, as being the relevant association nominee.¹⁴

The only major reorganisation of council committees occurred in 1982, when the capital works committee was abolished. Its responsibilities were collapsed into those of the finance and staffing committee, reflecting the decline of building at WAIT during the 1980s.

Honorary doctorates awarded by the WAIT Council in Watts' time reflected his community and industry predilections, in addition to rewarding those with outstanding records of institutional service. In the latter category were Dr Erica R. Underwood (1981); Dr Haydn Stanley Williams and Dr Reginald C. Buckett (1982); and Justice Alan Barblett (1986). Dr Dolph Warren Zink and Sir Charles Court (1982); Dr Walter Neal and Sir George Bedbrook (1984); and Dr Thomas Ivankovich (1985) had all been significant to WAIT's external relationships.

Watts' political sensitivity and flair for publicity were particularly evident in the selection of graduation ceremony speakers during the 1980s, when his policies began to attract much public attention. The politicians included Sir Charles Court (1982), Brian Burke (1984) and Robert (Bob) Pearce (1986) at WAIT; and at the School of Mines, during its many trials of the period: W. L. (Bill) Grayden (1981), James G. Clarko (1982), Peter Dowding (1983), Malcolm J. Bryce (1984) and David Parker (1985)—all prominent ministers at the time. Others included editor of *The Australian* Dr John Bremer, Sir Zelman Cowan (1982), Professor Eric Saint (1983), Professor Jean Watson (1985), Professor Donald Horne (1985), Katherine West (1985) and Professor Priscilla Kincaid-Smith (1986)—all prominent commentators on education; and Stuart Morgan (1981), Ralph Sarich (1983), Albert Tognolini (1985) and Professor Ralph Slayter (1986)—all from the world of science and technology.

Institute Management and the Divisions

At the institute-wide level the most significant new committee was the Institute Resources Board which, like its predecessor the Institute Planning and Resources Board, occupied a central role in advising the director on overall resource planning and management, capital works, equipment programmes and liaison with the Academic Board and divisional boards.¹⁵ Membership was reduced to eight persons: the six assistant directors; the Student Guild president; and the financial controller. Access as relevant was accorded faculty deans, centre directors, staff associations and heads of schools. Many subcommittees were abolished, their tasks being devolved to the new divisions.

The ASA vigorously opposed its exclusion, but Watts, with support from the Institute Resources Board, preferred ASA membership to be focused on the divisional structure where the staffing decisions were made, as a means of

forcing more responsibility on ASA representatives as well as of diluting the association's power at the centre.¹⁶ For Watts there was a major matter of principle in differentiating between staff representation on committees and representation of staff by the ASA, which he felt should confine its activities to industrial relations. Staff membership in the ASA and voting returns of members demonstrated, in his view, that the association could not claim to represent all institute staff.¹⁷

The principal change to Academic Board functions concerned the abolition of the courses committee. In the new organisation, however, the Academic Board gained powers to review budget philosophy, capital development and course priorities, which had previously been confined to joint meetings between the Academic Board and the Institute Planning and Resources Board. Subcommittees established under the new arrangements were a general purposes committee and a matriculation committee. The latter was introduced with a view to establishing uniform admissions criteria across WAIT, and to counteract tendencies in particular schools to relax standards whenever enrolment problems were encountered.¹⁸

At the divisional level the intention was to introduce both academic and resources boards, although for operational purposes the two functions might well be combined in one body. Divisions were left free to decide membership, although with encouragement to include members from other divisions so as to promote interdisciplinary co-operation. At faculty and school levels appropriate structures were left to the staff concerned, although for each course a board of study was mandatory and plans were launched to strengthen the role of advisory committees.

Within the Division of Engineering and Science, departments were eventually renamed schools, except for surveying and mapping. The Muresk Agricultural College underwent changes that are related later in this chapter. In another move the Science and Mathematics Education Centre (thus renamed in 1980) gained separate departmental status. The Department of Geology was amalgamated with the School of Physics and Geosciences, and renamed the Department of Geology and Geophysics. Metallurgy, in a reorganisation rendered necessary following changes at the School of Mines, became part of a School of Process Engineering which eventually comprised three departments: mechanical engineering, metallurgy and chemical engineering.¹⁹

There were minimal changes to the Division of Health Sciences and the Division of Business and Administration. The departments of psychology, and home and consumer studies, however, were added to the Division of Health Sciences rather than being included in the Division of Arts, Education and Social Sciences. The Department of Speech and Hearing Science also joined the Division of Health Sciences.

The new Division of Arts, Education and Social Sciences experienced a traumatic first few years which were dominated by funding issues. Staff in the division attributed many of its problems to the new director's drive on developments in the sciences and technologies, as well as on the internal

distribution of institute funds, based on formulae and indices which favoured those fields.²⁰ Outside the division, however, its problems were attributed to difficulties in pulling together its disparate parts and in improving staff morale. Associate Director Dufty no doubt exacerbated matters by referring to the division as simply 'the parts left over' from the restructuring, which did little to reassure staff in crumbling economic circumstances. His relationship with Watts at the time became increasingly strained.²¹

The situation greatly improved when Dr John Lake, then dean of education, acted in Dufty's place after his retirement in 1983. Lake returned to the Faculty of Education in 1984 on the appointment of Dr Peter Reeves as the new associate director in the division. Lake proved able to work closely with Watts and to enlist the support of divisional staff through regular negotiation and consultation. On occasion he had cause to stand up to his director's ebullience. After one such confrontation, Lake found a cartoon which depicted a boardroom scene where one member lay dead on the floor as the chairperson stormed from the meeting. The caption, which read 'Well done—it had to be said!', so appealed to Watts' sense of humour that he displayed the cartoon for years afterwards on his desk.

Reeves came to WAIT from a Chair of History at UWA, where he had been head of department, a strong staff association president, a member (with Watts) on UWA's Senate, and a leader in Indian Ocean and Indian history. Like Lake, he proved able to work with Watts, though not without a few stormy confrontations, and after his appointment the division appeared to enjoy a more balanced existence.²²

The Division of Academic Affairs suffered from a lack of permanent leadership in the first few years of the new organisation, when those in the chair were all in an acting capacity. Dr John Sharpham, an Australian working in the United States of America, was recruited with a view to promoting a more university-style academic culture at WAIT, especially in the introduction of doctoral awards and the promotion of research. He arrived in January 1983 to take up the position of associate director of this area.²³ The Robertson Library figured as one of the two major responsibilities of the Division of Academic Affairs (the other being the Computer Centre).

Unrelenting economics at WAIT nevertheless forced the institute in 1985 to undertake a review of library operations, staffing and management. The long-planned stage 2 building was repeatedly shelved by the Commonwealth and WAPSEC. Not until 1987 did approval eventually materialise. Internal operations meanwhile suffered from unavoidable contraction in the prevailing financial climate. Ironically, having been a pioneer in computerised systems, the WAIT library had now become saddled with antiquated and complicated systems based on outdated hardware. It had also been displaced from its prominent position among the CAEs. The WAIT Council accepted most of the recommendations of a committee reviewing the library in 1985, especially those calling for more professional staff salaries and conditions.²⁴

As far as the WAIT Computer Centre was concerned, in 1981 a computer policy committee was established, comprising the chairperson of each division and the head of the centre. This mapped out a policy favouring a strong central computing facility, with measures introduced to curb the upward spiral of computer demand while also promoting more rational and efficient usage.²⁵

Central planning of computer purchases for a seven-year period (1983-9) enabled purchases of important new technology within constrained budgets. In 1984 the Computer Centre installed an IBM 3031 computer and a large DEC 1091 (DEC-10) computer.²⁶ New computing centres later were established in the areas of mathematics and computing science, exploration seismology, electronic engineering and engineering graphics. The Computer Centre continued to employ IBM equipment in the Division of Business and Administration.

This all preceded, however, a virtual explosion in the demand for personal computers at WAIT during 1985, on which divisions spent more than \$500,000. Responding to the situation, the computer committee produced a report entitled 'Future of Computing at WAIT' which provided the basis for approaching prospective vendors of appropriate equipment. The upshot of subsequent negotiations was for WAIT to choose DEC as the main computer supplier and AMDAHL/Storage Technology equipment to support the DEC systems. An additional \$300,000 also was to be spent on personal computers and \$750,000 on CAD/CAM (Computer Aided Design/Manufacturing) equipment. The overall cost of \$10.2 million to replace WAIT's existing and now largely outdated computer equipment was to be financed by way of departments channelling sixty per cent of all equipment funds into computer purchases over the next few years. Introduction of the new equipment enabled most administrative programs and files to be converted to new VMS operating systems on a VAX.²⁷

External studies and the Educational Development Unit were two other parts of the Division of Academic Affairs to undergo careful examination by review committees. The Department of External Studies, renamed the Centre for External Studies and Continuing Education, was scaled down and academic staff relocated in divisions.²⁸ On George Idle's retirement, the headship passed to B. H. (Berry) Durston, who returned to WAIT after years in other employment.

The Educational Development Unit, although targeted by Watts for redeployment, had proved indispensable in developing instruments for student assessments of teaching, as part of the WAIT promotions schemes introduced in the 1980s. Indeed this work won for Alan J. Lonsdale, D. Openshaw and others a national and international reputation. Moreover, at the time the economies were under consideration, a Commonwealth report on similar units around Australia assessed WAIT's Educational Development Unit as among the best in the country.²⁹ These factors saved the unit from dismemberment, although its roles were more strictly prescribed and some redeployment of staff was undertaken. Afterwards the unit became involved in management training for

departmental and school heads, and extended its work in staff teaching development.

Derek Holroyde's initial suspicions in 1980 about the director's commitment towards the Centre for Communication and The Arts were allayed by Watts' mastery of publicity, and shrewd assessment of the community impact of Radio 6NR, the Hayman Theatre, publications, the artist-in-residence programme and the maintenance of the art collection.³⁰

In spite of severe economics, much was achieved in improving WAIT's community relations in the 1980s. A first priority was to revamp schools liaison with the appointment of John Hughes to a new position.³¹ In other actions, when the 6NR licence came up for renewal in 1982, WAIT reconfirmed its financial commitment. Publications were completely overhauled during 1980 and 1981, despite budget reductions which caused the *Gazette* to be discontinued. *The Reporter*, a regular news publication, went from strength to strength. Media services, reconstituted in 1981 as the Educational Media Centre, provided valuable support for WAIT's educational ventures and also undertook outside contracts. The Western Australian Theatre Company (later the WAIT Theatre Company) maintained its reputation for experimental and even daring productions, with one in 1983 *Titus Andronicus* causing something of a stir by featuring nudity.³²

The art collection was also maintained, though WAIT lacked a suitable gallery. Nevertheless, newsworthy exhibitions in 1981 and 1982 were highly successful. The first, the annual Invitation Art Exhibition, featured work of artists who had come under the influence of the celebrated local painter, David Foulkes-Taylor. The second, held at the State Art Gallery and opened by retired director Dr Haydn Stanley Williams, exhibited a collection of WAIT's art works. Other notable events included an Aboriginal Arts Festival (1983) and an Indian Ocean Fair (1984).

Budgetary problems and Watts' priorities in science and technology generated council concerns during 1980, when Mervyn Parry asked for a reaffirmation of institute support for the arts.³³ The outcome was favourable and in 1981 a WAIT graduate, Peter O'Neil, was appointed curator of the art collection. Later, in 1984, the council approved modifications to the administration building to provide a small exhibition space for art displays. Named the Erica Underwood Room, it was opened in November with a display of medallions and photographs of WAIT's honorary doctors of technology.³⁴

During 1984 the council agreed to set aside 0.1 per cent of the institute's recurrent budget to maintain and augment the art collection.³⁵ In terms of public visibility and promotion of a wider culture at WAIT, no programme was as effective as the artist-in-residence scheme, which continued into the 1980s, supplemented by a writer-in-residence scheme within the School of English. Visitors under these schemes included: writer David Martin; artist Oliver Postgate (1981); novelist Elizabeth Jolley (1982 and, again, in 1986); Polish ceramic artist Maria Kuczynska; environmental installation artist Nigel Helyer;

photojournalist Ron McCormick (1983); composer Stephen Benfall; textiles and fabrics craftsman Michael Brennand-Wood (1984); poet Chris Mansell (1985); and writer-in-residence Judith Rodriguez (1986). Jolley, who became a great friend of WAIT, was awarded an honorary doctorate of technology in 1986.

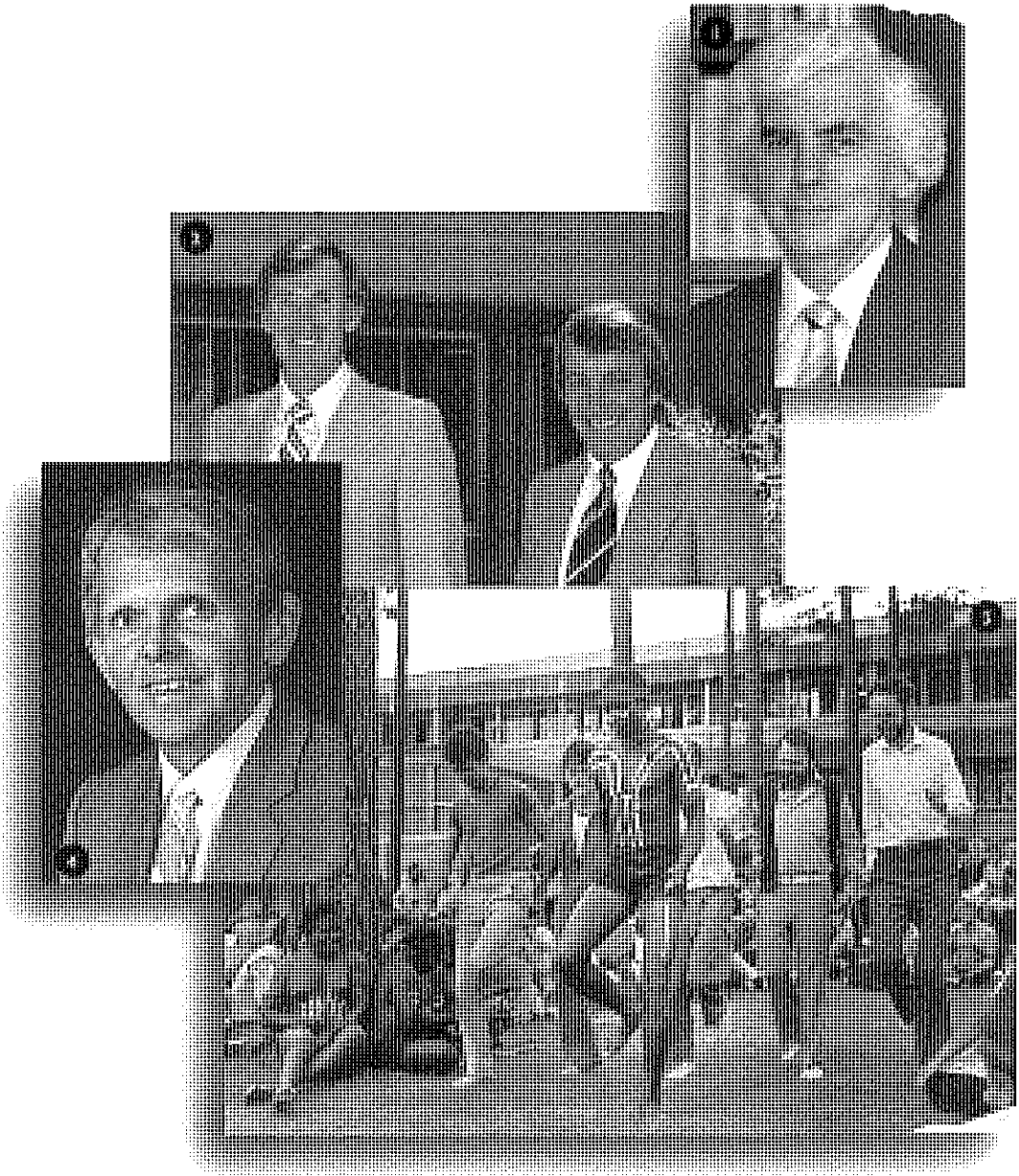
Academic planning, a section of the Division of Academic Affairs, developed out of an earlier task force headed by Dr Stephen Hunter and absorbed institutional research functions led by Dr W. N. (Neil) Bardsley in the Educational Development Unit. The section carried out studies (amongst others) into student demand for higher education in Western Australia, the performance of mature-age students and the transfer of TAFE students into higher education.³⁶

The Division of Academic Affairs also managed the Office of Academic Secretary, which was mainly concerned with accreditation matters. These bulked especially large in institute concerns after 1984, as procedures for internal course validation were introduced. In 1982 WAIT was admitted to the Association of Southeast Asian Institutions of Higher Learning, the first Australian non-university institution to be so, and in later years student exchange agreements were concluded with the Kansai Gaidai University in Japan, and the University of Illinois at Urbana-Champaign.³⁷ During 1984 the office geared up for WAIT's ventures into the recruitment of full fee-paying overseas students.

Efficiency in student services became a serious issue in 1982 and 1983, when WAIT incurred penalties by enrolling students in excess of Commonwealth-approved totals. The outcome was for the Office of Admissions and Student Records to be shifted in 1981 to the Division of Administration and Finance; while improved computer facilities linking WAIT to the Tertiary Institutions Service Centre enabled WAIT in 1982 to shake free at last from reliance upon the Western Australian Regional Computing Centre, which had been overloaded and subject to breakdowns at critical times.³⁸

The Division of Administration and Finance, under John Dolin, occupied central stage in the reorganisation of 1981 because of the budgetary implications of devolution to the other divisions. Admissions and student records was shifted, as mentioned above, to the Division of Administration and Finance, although other aspects of the Academic Registrar's Office were transferred to the Division of Academic Affairs. The Division of Administration and Finance by 1983 was responsible for the Office of Financial Controller, the Academic Secretariat, the Office of Admissions and Student Records, personnel services, and property and services sections.

Under the reorganisation the Office of Financial Controller largely remained untouched. Its head Peter Yacopetti played an extremely significant role in producing a budget model that was acceptable to academic divisions, in preparing budget drafts each year and then in monitoring expenditure within the divisions. Watts relied heavily upon Yacopetti's financial skills, while also

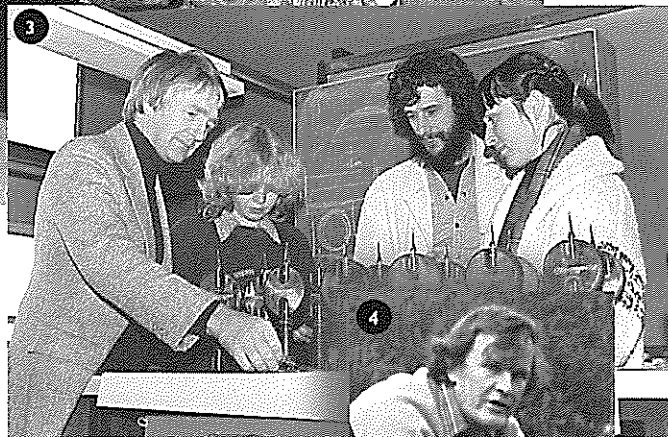


1 Dr Peter Reeves, a leading scholar in Indian history, was appointed associate director of the Division of Arts, Education and Social Sciences, 1985.

2 Dr Leo Foster (*left*), dean of teacher education (1977–81), with Dr John Lake, who succeeded him as dean in 1982.

3 The Aboriginal Arts Festival '83 featured a corroboree organised by the Pitjantjatjara mob from South Australia. Lecturers Peter Efford (*second from right*) and Paul Green-Armytage (*right*) were invited to join in.

4 Dr John Sharpham joined WAIT as associate director of the Division of Academic Affairs, 1983.



1 Writer Elizabeth Jolley became part of the WAIT establishment as a writer-in-residence.

2 A new exhibition space in 1984 was named the Erica Underwood Room in tribute to one of the WAIT Council's longest-serving members. At the naming ceremony Dr Erica R. Underwood (*second from right*) with guests (*left to right*) Michelle Watts, Dr Dolph Warren Zink, Pamela Zink, Peggy Holroyde and Derek Holroyde, listening to WAIT Council Chairperson Justice Alan Barblett, on the right.

3 Art and Design Lecturer David Walker (*left*), designer of the WAIT logo, with students.

4 Artist-in-residence Lou Lambert helping to position his sculpture near the art and design building, July 1982.

establishing a close working and personal relationship with him.³⁹ Not surprisingly, Yacopetti succeeded Dolin when the latter retired in 1985.

Subdepartments of the Office of Financial Controller were management accounting, accounts, internal audit, business enterprises, the statistician's office, and the organisation and methods branch. Their heads included R. C. (Rod) Pope, Malcolm Cunningham, L. M. (Peter) Croy and R. J. (Bob) Watson, who had been with WAIT since its earliest days. As in the past, one of the great strengths of WAIT's administration and financial control lay in the development and further extension of sophisticated computerised systems.

Among the other subdepartments of the division, criticism always seemed to dog personnel services. Devolution to the academic divisions perhaps multiplied its problems where recruitment was concerned, since this increased the monitoring involved. As the office concerned with industrial relations, personnel services also encountered much of the bitterness associated with staffing redeployment and redundancy when the financial situation became critical in the mid-1980s.^{40*}

Special Cases: School of Mines and Muresk

In the reorganisation at WAIT decisions about the School of Mines were shelved until the State government had declared its own position. The announcement in February 1980 by Minister for Education Peter Jones, that the School of Mines and the Eastern Goldfields Technical College would be combined as an independent institution from January 1981, was only the start, however, of an extremely contentious debate. Jones' successor as minister, W. L. (Bill) Grayden, when he assumed office in March 1980 faced a potentially explosive situation, with both staff and students at Kalgoorlie united against the independent college proposal. He asked the working party set up by Jones, to widen the possible options. He himself favoured a loose federation as originally intended.⁴¹ The council of the federated college as well as local pressure groups, wedded now to the idea of an autonomous and amalgamated institution, could not agree on a proposal to advance to the minister.

Watts himself, early in 1980, flew to Kalgoorlie for discussions with staff and students, who were understandably anxious about their future under the new arrangements.⁴² Students staged a sit-in in his office at Bentley, demanding that the school remain as part of WAIT. In the meantime, however, the government procrastinated, adding to the confusion and loss of morale at Kalgoorlie. The WAIT Council in September formally urged the minister to make a decision, and spelt out its conditions for continued involvement with the School of Mines.⁴³ Grayden announced in November the government's decision to establish an amalgamated institution under the Colleges Act, to be called the Western Australian School of Mines and Further Education. At this point the WAIT Council, although convinced that the decision was a fairly cynical political exercise, began considering the mechanics of transferring staff

* See Appendix 7 for outline of WAIT's general organisation in 1984.

at Kalgoorlie to the new institution and examining contractual arrangements regarding courses, standards and awards.⁴⁴ It also asked Reginald C. Buckett to remain as a co-opted member of the WAIT Council for another year.

The Interim Council of the new college asked WAIT to maintain its current roles with students and courses during 1981, until the new college assumed control in January 1982. In any event, the Interim Council's task became impossible, since academic staff from WAIT and the Eastern Goldfields Technical College would not sign contracts with the new college. The students voted with their feet by accepting offers to complete their courses elsewhere. By August the WAIT Council was alarmed at the lack of progress being made, which threatened the very viability of the institution at Kalgoorlie.⁴⁵

In view of the virtual student and staff rebellion at the School of Mines, Watts drummed up support from Sir Laurence Brodie-Hall; politicians Graeme Campbell and W. L. (Bill) Grayden; WAPSEC Chairperson Pullman; the Chamber of Mines; the staff associations at Bentley and Kalgoorlie, and students on both campuses, to by-pass the Interim Council and independently find a solution. Thomas Ivankovich threw in support, since the joint Technical Education Division-WAIT venture at Collie was affected. With Brodie-Hall, Watts was convinced that the School of Mines had no future outside WAIT, and indeed that WAIT should as a matter of principle be involved in training for the State's premier industry—mining. Watts drove home with WAPSEC, however, that WAIT's continued involvement depended on allocation of the necessary resources.⁴⁶

At the same time, the WAIT Council advised the State government that unless the whole situation was quickly resolved, it would be forced to terminate its connection with the School of Mines. This had the desired effect, for the government announced a delay of twelve months in establishing the new college, while asking WAIT to continue its operations for staff and students during 1982.⁴⁷ Brodie-Hall, who replaced the chairperson of the new college's council, now set out to find a better formula for the future. While the situation was thus contained, WAIT and WAPSEC entered negotiations about guarantees of staff salaries and conditions. Brodie-Hall quickly moved to restore morale at Kalgoorlie and to reach a firm solution by the end of March, confident of support from both WAIT and the State government. The State government, for its part, extended guarantees on employment to the college staff.⁴⁸

The new Interim Council, under Brodie-Hall, soon found its options considerably narrowed when the Commonwealth government announced it would not recognise an amalgamated college, as originally planned, as a CAE with respect to funding. It would only countenance a loose federation under which advanced education courses were controlled, staffed and funded by WAIT. Alternatively an independent college might contract with WAIT for the higher education courses, with staff perhaps seconded from Bentley for the task.⁴⁹

The new minister for education, James G. Clarko, who had succeeded Grayden in early 1981, responded to this situation and the general tone of discussion with people and interests concerned, by announcing in June yet another government decision on the School of Mines. This involved retention of the School of Mines as a branch of WAIT, but under the management of a reconstituted board with a large measure of independence and a budget established by WAIT and WAPSEC. Simultaneously Clarko announced the transformation, under the Colleges Act, of the Eastern Goldfields Technical College into an independent community college managed by its own council, to be known as Kalgoorlie College.⁵⁰

During August Clarko submitted to Parliament amendments to the WAIT Act, giving statutory status to the new Board of Management of the School of Mines, now officially named the Western Australian School of Mines. It comprised a chairperson and twelve members, two nominated by the WAIT Council.⁵¹ Brodie-Hall, appointed to the chair of the Board of Management, immediately became a member of the WAIT Council, replacing the long-serving Reginald C. Buckett. In doing so, he cemented his already pre-eminent role in the history of the School of Mines, from the start of its relationship with WAIT in 1967.

The School of Mines under the new arrangements was accorded a separate budgetary priority. This reopened old resentments among WAIT staff, since neither the State government nor Commonwealth government adjusted WAIT's funds to accommodate the special demands of the branch at Kalgoorlie. Brodie-Hall nevertheless exercised his immense influence with the mining industry and community, as well as injecting a considerable sum of his own money, to alleviate somewhat the financial situation. Establishment of a Western Australian School of Mines Education Fund in 1983—a Brodie-Hall initiative—brought \$400,000 in supplementary assistance to fund student scholarships, consultancy and testing work, acquisition of new equipment, the engagement of specialist staff, and other projects 'furthering and enhancing the WASM [Western Australian School of Mines] as a mining education centre of excellence'.⁵²

The outcome in 1982 brought the School of Mines into the new WAIT structure as a significant element, akin to one of the academic divisions, but with the special sanction of the State Parliament. The new Board of Management, although advisory to WAIT in academic matters, gained substantial financial independence on the operational side. As for co-operation between the School of Mines and the new Kalgoorlie College, each institution provided a member for the other's council. This encouraged the joint use of facilities—for example, the Kalgoorlie College library to which the School of Mines' holdings were transferred under an agreement with WAIT.

The principal of the School of Mines, Dr Ifan (Odwyn) Jones, during 1982 prevailed on Watts to expedite the appointment of principal lecturers in extractive metallurgy, mining geology, and mining and engineering, in order to provide desperately needed stability and leadership.⁵³ He himself during 1981

had become convinced that the amalgamated college proposal would not work and, with the support of Brodie-Hall, had gone to the State government with this conclusion. WAPSEC, for its part, allocated \$1.4 million for operations in 1982.

Capital development at the School of Mines had progressed during 1981 and 1982 throughout the period of crisis. The Commonwealth government and State government combined to fund the construction of a new technology building, involving \$616,483 from the State for a new Kalgoorlie Metallurgical Laboratory; and \$1,805,537 from the Commonwealth, administered through WAIT to construct new premises for metallurgy and chemistry.⁵⁴ The old Metallurgical Laboratory afterwards became a student recreation room.

In the 1981 reorganisation Muresk Agricultural College remained as part of the Division of Engineering and Science. But the WAIT Act amendments of 1982 concerning the School of Mines provided a precedent for establishing other branches of WAIT, gazetted officially for the purpose. A review committee considered the possibility of according the Muresk Agricultural College a similar status to the School of Mines, though without the statutory base.⁵⁵ The principal at Muresk, under this organisation, would report directly to the director and gain ex-officio membership of the Academic Board and the Institute Resources Board. A reconstituted Management Board also would be needed.

Review of Institute Restructure

The WAIT Council in 1984 instituted a review of the new institute structure, chaired by Richard Reynolds. It considered thirty-nine submissions from around the campus and conducted interviews with a number of senior staff members.⁵⁶

Broadly speaking the review committee found widespread acceptance of the new structure and the philosophy behind it. Most complaints concerned management aspects, while the organisation was still in the process of settling into place. The committee made some adventurous proposals involving the abandonment of the education and general policy, and finance and staffing committees, in favour of specialist standing committees established to consider major recurring issues. This would entail a redistribution of council power and responsibilities to the Institute Resources Board and the Academic Board, with final debate left to the council.

Regarding the institute's major committees the Reynolds group agreed that the Institute Resources Board appeared to be working well and as intended. It was regarded as the unofficial executive group at WAIT, capable of swift response when time precluded full discussion of particular issues. On Academic Board operations, the situation was very different. It was considered in 1984, as had been the case back in 1968, to be ineffective. The Academic Board lacked executive powers; was chaired by the director, to whom it was advisory; was too large (at thirty-five members, with more eligible to attend); attracted parochial representation rather than focusing on broad institutional issues; and dealt with

general and philosophical issues that did not yield easily measurable outcomes as, for example, did deliberations of the Institute Resources Board.

Behind these assessments lay a residue of academic resentment about the historic weakness of WAIT's Academic Board. Moreover, the new director Watts was so forceful as chairperson that many academics felt overpowered by his presence. The provision of an independent Academic Board chairperson thereafter assumed the proportions of a major political agenda among many academic staff. The Reynolds committee recommendations favoured a reduction in Academic Board membership to eighteen; allocation of the chair to the associate director (academic affairs); and the re-establishment of the courses committee in connection with accreditation matters and other course issues.

The review committee's consideration of possibilities to extend the branch status arrangements—now in operation at Kalgoorlie—to Muresk Agricultural College has already been described. Further adaptation of this branch status, proposed for the therapy sections of the Division of Health Sciences at Shenton Park or for a joint Technical Education Division–WAIT mining education venture at Collie, was not supported. It was recommended, however, that WAIT should seek out relationships with regional TAFE and community college institutions to exploit emerging off-campus opportunities around Western Australia.

The committee was chary of claiming unqualified success for the new structure. Some divisions appeared to have adapted quickly, but others were still convinced that much of the real power still lay with the central administration at WAIT. Moreover, devolution had occurred at a time when the resources needed to achieve its ends were no longer available. Development of powerful divisions had the further potential disadvantage of encouraging centrifugal forces that might not benefit the institute as a whole.

Communication across divisional boundaries therefore was important, as was staff training for associate directors and other leaders. Regular meetings between the director and associate directors had bridged something of this gap at the senior management level, while a heads of schools group had also formed. The committee considered that this group should be consulted more regularly by the director. Closer relationships also should be established between the WAIT management and the academic and salaried staff associations.

It took some time for the Reynolds review to circulate around the campus before it was finally considered by council during 1986. On the committee's recommendations, the council voted to reconstitute membership of the Academic Board to involve more junior staff and to include the chief executive officers of the School of Mines and of Muresk Agricultural College.⁵⁷ The Institute Resources Board membership also was altered to include the forementioned two officers, as well as representatives of the academic and administrative staff associations (who had been excluded in the earlier reorganisation).

In one significant change an elected chairperson was to lead the Academic Board, who would also be an ex-officio member of the Institute Resources

Board. Dr John Lake was elected the first chairperson.⁵⁸ The board afterwards sought to obtain financial support for the position, a proposal vigorously opposed by Watts because of the costs involved. At the time, he also believed that WAIT's chief executive officer should lead such committees as the Academic Board or else be faced with the need to oppose particular board decisions when they came before council committees and the WAIT Council itself. There were legal obstacles to another suggestion from the Academic Board, seeking for its chairperson ex-officio membership of the WAIT Council. This change would require amendments to the WAIT Act.

In May 1985 Muresk Agricultural College was renamed the Muresk Institute of Agriculture and established as a non-statutory branch of WAIT.⁵⁹ The council appointed Dr Ian Fairnie as director, replacing Dr Clyde A. Smith who left for work in Africa; and a fifteen-member Board of Management was established, chaired by Sir Donald Eckersley. John Taplin, the council's representative, provided a regular channel of communication between Muresk and the WAIT Council. Considerable budget and administrative responsibility was transferred from the Division of Engineering and Science and central administration, enabling the new Institute of Agriculture to function on similar lines to an academic division.

Promotions, Professors and Industrial Relations

The restructuring of WAIT was designed, in part, to inject a more entrepreneurial research and development ethos in the Institute of Technology. The other key to that change was staffing policy, particularly promotions, which had ground to a halt in 1978 and 1979. From the start, negotiations about a promotions scheme proceeded against a background of staff discontent over salaries and rising anxiety about redundancy as Commonwealth funding continued to shrink. The ASA joined the Federation of College Academics in vigorously promoting a case to the Ludeke review (1980) for reinstatement of parity with university salaries.⁶⁰ Staff won salary increases, but nothing to support the parity case.

It was the Review of Commonwealth Activities (the so-called 'Razor Gang' review) of 1981, however, that heralded significant institutional amalgamations in advanced education, forced academic redundancy into the open as a major issue, and also predated the appointment of a Senate Committee of Inquiry into the Tenure of Academics (Teague).⁶¹

Immediately on joining WAIT, Watts asked the WAIT Council to conduct an inquiry into employment conditions of academic staff.⁶² When frustrated by the slow pace of the council's investigating committee, Watts himself drew up a report on staff conditions, which he sent to the Institute Resources Board and the council in May 1981. He also chaired a working party to consider a promotions scheme included in his report.⁶³

The council approved the essential elements of Watts' proposals (which were similar to its own committee's), and especially those dealing with tenure

and fractional appointments. Regarding tenure, the council accepted a definition already agreed to by the ASA, requiring a probationary period of three years followed by a review, and specified grounds for the termination of tenure. On fractional appointments, conditions accepted were those adopted in the Academic Salaries Tribunal (Ludeke) determinations of 1980.

Where academic staff profiles and promotion were concerned, the council committee framed its recommendations in accordance with the spirit of devolution in the restructuring of WAIT. A new system of determining staff establishments, which abandoned arrangements based on student:staff ratios, set upper limits to expenditure on staff in the divisions, with a limit of 82.5 per cent of a total divisional budget for salary being spent on tenured positions. Guidelines were introduced controlling the distribution of staff across the various grades, and the financial controller, Yacopetti, projected the budget implications. Watts planned to minimise the disruptions to these projections as a consequence of promotions, by using his director's discretionary reserve to meet the costs for three years. At the end of this period, divisions would need to adjust their staff profiles to absorb the costs.⁶⁴

A central promotions committee was established, chaired by council member Wilfred Ewers who got the system off the ground and established its credibility. Criteria for promotion were spelt out, including teaching performance, research and scholarship, community involvement and professional activity. Central to the process, however, was an assessment of teaching judged in part on student assessments. Watts later was able to extend the notion of annual review as a staff development function, performed by heads of schools and their own superiors. In developing the processes and instruments employed in the promotion process, the Educational Development Unit established systems that proved of considerable interest both nationally and overseas.⁶⁵

WAIT established a separate system for promotion to higher posts at the level of principal lecturer and head of school, the latter being equivalent to professorial level.⁶⁶ This last provision lay close to Watts' heart in seeking to develop a high level leadership at WAIT in the research and development areas. In broad terms the promotions scheme was intended to reward all aspects of academic work, but the elements of scholarship and research received special emphasis.

Watts firmly supported the idea of making Campbell classification head of school appointments a necessary corollary to his research and development thrust at WAIT. Giving these the appellation 'professor' was perhaps another matter. The question of professorial awards had been raised in 1977 and 1978, but had not advanced very far. Dufty had proposed that senior academics should be given professorial titles, but the matter had been dropped when opposed in Commonwealth circles.⁶⁷ Watts revived the issue in November 1983, emphasising that the title was already in use (if sparingly) in other institutes of technology and in many British polytechnics. The guidelines for appointment or promotion to such positions, moreover, were designed to

ensure that all appointees would stand comparison with any from the traditional universities. The proposals, after some misgivings following adverse publicity experienced at the RMIT and the NSWIT, which had already begun appointing professors, were passed by council in 1984.⁶⁸

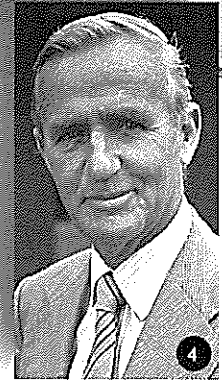
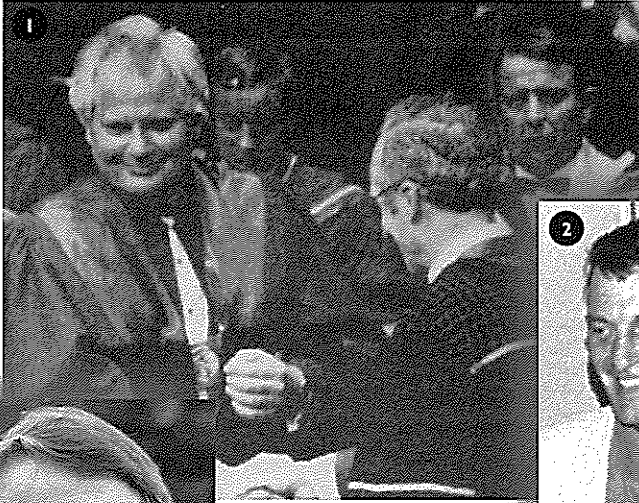
The first promotions, announced in December 1981, broke a long drought at WAIT, although the successful candidates were few in number. WAIT's first professor, appointed in 1984, was Dr Laurie Hegvold, head of the School of Architecture. His appointment was followed later, in 1985, by those of Dr Barry Fraser (education), Dr Lance Twomey (physiotherapy), Dr David Bennett (rural management at Muresk) and Dr Geoffrey Soutar. Soutar had joined WAIT from UWA to head the School of Management.

Soon after his arrival in 1980 Watts moved to replace the staff club facilities at 'Barney's' as another means of generally upgrading staff conditions at WAIT. A building project committee chaired by John Dolin eventually completed specifications for WAIT House, as it was called, in February 1981. Work started almost immediately and the building was finished for occupation in 1982. The complex included a \$150,000 conference centre, the cost of which was additional to the \$354,000 provided by the WAIT Council from Special Funds.⁶⁹

Perhaps inevitably, the opening of WAIT House coincided with the winding up of the Karina Club. Towards the end of the 1970s the club had found difficulty maintaining the level of staff wives' interest, partly due to the fact that many now worked. Also, the club had been created to cope with the needs of new staff arriving in droves in the early years. That situation had drastically changed since 1975. The burgeoning size of WAIT too, appeared to have the effect of eroding the motivation to promote an institute-wide sense of community, as had applied in the first years.

Whatever positive effects may have been generated by the promotions policy and WAIT House, they were soon offset by the need for WAIT to introduce formal policies on redundancy. One problem facing Watts as he entered the WAIT campus in 1980 was a fifteen per cent salary increase claim by the Civil Service Association, to which WAIT non-academic salaries were linked. As a result, the WAIT budget needed trimming by no less than \$810,000 in 1980 without the promise of Commonwealth supplementation.⁷⁰ Stringent staff ceilings were immediately introduced, with Watts himself undertaking to approve any replacement. Attention was quickly directed too, to academic departments overstaffed on established formulae.⁷¹

Budget reductions for 1982 involved cuts of 4–8 per cent, most heavily oriented towards the Division of Academic Affairs and the teaching divisions of business and administration; and arts, education and social sciences. Both the latter divisions complained bitterly about the impact on their budgets of indices which, in their view, favoured the applied sciences and technologies. They also ascribed part of the problem to the science and technology emphasis in Watts' own plans for the future of WAIT, although perhaps ignoring the fact that the School of Mechanical Engineering was faced with similar problems. Under the



1 Dr Thomas Ivankovich, awarded an honorary doctorate of technology in 1985 for his contribution to mining education, was congratulated by K. D. (Des) O'Sullivan (*back to camera*), the acting chairperson of WAIT Council.

2 Muresk's first professor, Dr David Bennett, was appointed Wesfarmers Professor of Rural Management, 1985.

3 The new technology building, next to the original School of Mines building in Kalgoorlie, opened in 1982 to house the School of Mines' Metallurgy Department and the Kalgoorlie-based metallurgical laboratories of the Mines Department.

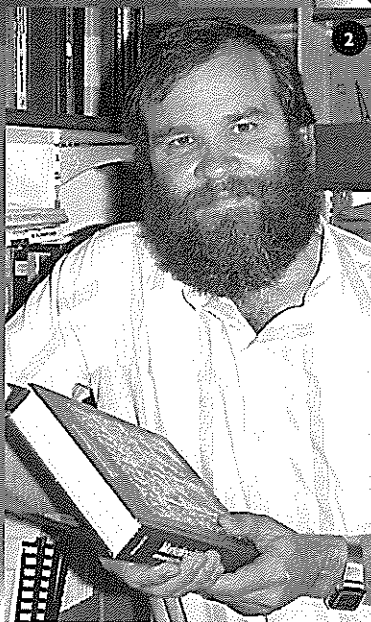
4 Dr Reginald C. Buckett, awarded an honorary doctorate of technology in 1982, represented the School of Mines on the WAIT Council for twelve years.

5 Dr Ian Fairnie was appointed inaugural director of the renamed Moresk Institute of Agriculture, 1985.

Professorial title to be introduced at WA institute



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By CAROL SIMMONDS

PROFESSORIAL titles are to be introduced at the West Australian Institute of Technology following its council's approval of a personal recommendation from the director, Dr Don Watts.

The first WAIT professor will be named within a few months but there would be no more than four appointments.

was inconsistent with the aspirations he had for WAIT. Later the institute set up a head of school promotions committee and one person, Dr Laurie Hegvold, of the school of architecture, has since been promoted to head of school salary.

Under the new system, the Promotions Committee will be renamed the Personal Chair Committee and the professional promotion procedure, which is not yet finalised, will be different from the existing one.

Dr Watts admitted there had been an adverse reaction from the university sector when WAIT introduced professorial titles but he believed a similar response to WAIT's scheme would be misconceived. My frank opinion is that all types of institutions are attempting to maximise the quality in their own way based upon different philosophies, he said. "There are some areas in which we overlap and compete. I think WAIT has established, as much as any other institution in Australia, that it has a different philosophy from the universities.

Selective

"That does not mean that the community's perception of status, the professorial title should be the sole presiding influence at the universities.

He denied that having professorial titles in the colleges would debase the title. WAIT would be more selective.

"We will only promote nationally from principals to head of school salaries thus professorial titles are very strict conditions. "The requirement of outstanding contribution to the achievement of the institution's objectives; national



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1 Annemie Gilbert, elected ASA president in 1983, was the first woman to hold the position at WAIT.

2 Head of the School of Management, Dr Geoffrey Soutar, was one of the first WAIT professors.

3 On-line access to student and administration records was greatly increased with the installation of a new DEC 10 computer, shown being delivered to the Computing Centre in 1983.

Background: Excerpt from *The Australian Higher Education Supplement*, 14 March 1984. ©The Australian

Institute of Technology on an internal basis. WAIT toyed with the idea of professorial titles some years ago but it was a dead issue until Dr Watts, faced with the problem of recruiting in the international academic market, took it up as a means of attracting excellence.

budgetary devolution arrangements, the burden of overstaffing in arts, education and social sciences needed to be carried in the short term by the School of Architecture and Planning, and the Faculty of Education.⁷²

A redundancy scheme introduced in 1981 involved referral of redundant staff to an institute placement committee, charged with the task of finding appropriate employment.⁷³ If no alternative employment could be found, a severance agreement was to apply. The ASA understandably contested the whole redundancy process and publicly refused to accept the need for compulsory redundancy. ASA President Steve G. Forte and his successor, Scott MacWilliam, attacked the proposals as the result of poor management and threatened to institute court action against WAIT.⁷⁴ Watts defended the reduction of staff numbers as a matter of prudent management in the face of financial realities. An additional factor, he emphasised in a move intended to get students on side, was that retaining excess staff would deny students their proper share of institute resources.⁷⁵

Negotiations between the ASA, Associate Director (Administration and Finance) Dolin, and other parties continued until redundancy policies and procedures in their final form were approved in November 1982. (In fact there were virtually no compulsory terminations under the scheme, although a number of staff in arts, education and social sciences took advantage of voluntary termination.)⁷⁶ The system at the time attracted some notoriety, owing to the fact that academics themselves were responsible for identifying redundancies in their own divisions.⁷⁷ In this respect, Watts saw devolution forcing staff to face financial and management realities and thereby weakening the power of the ASA. There was at least one positive outcome: WAIT already had introduced schemes for assessing tenure, promotion and redundancy by the time the Teague committee's report was released.⁷⁸

The election of Annemie Gilbert as WAIT's first female ASA president, in 1983, signalled a rising interest in equal opportunity for women at WAIT, while both the Commonwealth government and State government passed specific legislation to ensure equal rights for women.⁷⁹ Despite the serious financial and staffing problems of the time, an equal opportunity co-ordinator was appointed in 1985. Watts was instrumental in the selection of Maureen Bickley, whose tasks included the preparation of an equal opportunity employment plan as required under the Equal Opportunity Act, and of a major report on sexual discrimination in WAIT's staffing profile.⁸⁰

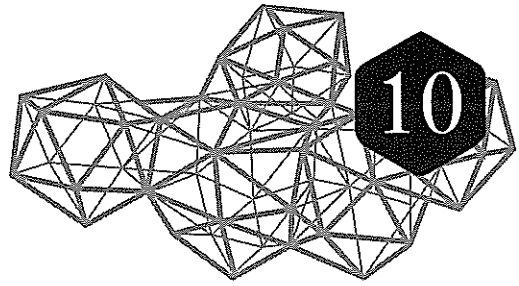
Other staffing issues were concerned with legislation to give the academic staff associations access to the State Industrial Commission, such as had been denied in 1979. The incoming Labor Government in 1983 introduced a new Industrial Relations Act under which academics were eligible for industrial award coverage. On more serious consideration the Western Australian Federation of College Academics objected to their grouping with public service officers for purposes of the Act. Amendments to the Act in 1984 accommodated these reservations.⁸¹

Academic salaries were a major issue in the ASA during 1984, however, as the Labor Commonwealth Government attempted to boost higher education

enrolments by containing costs. This was to be achieved through splitting a salary rise to academics into two parts, one paid in 1984 and the second a year later. Commonwealth Minister for Education Susan Ryan added salt to the wound during 1985 by commissioning a report on efficiency and effectiveness in higher education. Regarded by the unions as a thinly veiled move to further downgrade academic conditions, the report heralded the introduction of salary increases tied to productivity trade-offs.⁸² Once again, however, WAIT's early attention to staff policies placed it at the forefront of Australian institutions now faced with the necessity of preparing similar policies and procedures.

The longer term impact of staff discontent and Commonwealth policies in higher education was to force both unions and institutional managements into collective nation-wide organisations to cope with industrial processes. The ASA, along with its counterparts at State and Commonwealth levels, approved recommendations in the Hancock Report on industrial relations in Australia, which advocated abolition of the Academic Salaries Tribunal and the opening of access to Commonwealth arbitration machinery for the academic staff associations. The institutional managements, for their part, in 1985 formed the Advanced Education Association of Employers, of which WAIT became a member.⁸³

The restructuring of WAIT and the introduction of new promotion policies formed the foundation upon which Watts intended to expand WAIT's role in community service and, particularly, research and development. In this respect, WAIT early in the 1980s effected organisational and staff policy reforms that put it in the forefront of Australian higher educational institutions; ready to cope with the particularly difficult political and financial situation that quickly unfolded as the Australian economy staggered into a crisis situation much worse than that applying a decade earlier, in 1975. It is in the area of research and development, however, that WAIT made substantial strides during the 1980s, and these eventually led almost inexorably to confrontations with established government policy where advanced education was concerned. The transformation in WAIT's research and other academic activity is considered in Chapter 10.



Research and Development 1980–1987

WAIT had already established a research and development base before Dr Don Watts' period, but the new director's leadership brought a vigour and entrepreneurial drive that helped to transform the institution in the 1980s. This was achieved against a background of rising public awareness of Australia's neglect of research and development in broad economic policy. Government policy responded slowly at first with such measures as the Australian Science and Technology Council in 1977, the Myers inquiry, and the establishment in October 1980 of a Commonwealth Ministry of Science and Technology. The funding of national centres of research excellence from 1982, and legislation (in 1981) to reform the Research and Development Incentive Act were other signs of increasing national concern.

Watts had barely commenced work at WAIT before he approached Premier Charles Court for support in facilitating WAIT's research and development activities.¹ In his view WAIT should be poised to contribute to the technological challenges facing Western Australia in developing off-shore natural gas resources, finding alternative sources of energy and liquid fuels, exploiting mineral resources, developing chemical industries, expanding secondary industry and enhancing facilities in marine technology. To this end Watts sought State government support in establishing a 'State Centre for Technology' on the Bentley campus, with the object of concentrating WAIT's major equipment items to encourage industry contracts.²

In another initiative Watts took up with the State government possibilities of conducting a survey of technological work-force needs in Western Australia. A group which was formed to consider the matter: Dr W. A. (Bill) Pullman and Dr Ken Hall, from WAIT; Professor A. Kerr, from Murdoch University; and Professor A. Morkel, from UWA, did not support the idea which was then shelved.³

Technology Park

Watts formed a group at WAIT to refine the general propositions into a consolidated plan. Involved were Planning Officer Stephen Hunter; Dean of Applied Science John de Laeter; Head of the Department of Metallurgy Terence Pyle; Senior Lecturer in Chemistry Gerard Leahy; Assistant Director (Academic Services) Tom Kennedy; and Management Services Officer Paul Main. The plan incorporated three elements: the centre for applied science and technology, a product innovation centre, and a technology park.⁴

Plans for the centre took as a model a similar centre at the University of Tasmania. It envisaged a building costing \$800,000 which would be funded from government and industry, with possible co-operative ventures between WAIT and industry in the areas of electrolytic extraction, isotopic studies, materials science and marine science and technology.

It was also proposed that a manufactured products development unit should be created, dedicated to the creation of new industrial enterprises, with access to business skills, as well as scientific and technological advice and training for potential innovators and entrepreneurs.⁵

The third feature of the plan incorporated the creation of an 'industrial park' alongside WAIT. It was considered that the park, perhaps under the Department of Industrial Development, might provide a site where small factories could find rented premises and access to scientific, technological, design and management skills available in the centre for applied science and technology. The plan also saw UWA and Murdoch University becoming associated in the venture.

Financing an Idea: the Early Stages

The original thrust in WAIT's initiative was to seek funding from the Commonwealth Department of Productivity. A submission was sent in September 1980 asking for a \$610,000 grant, with Watts lobbying energetically with Commonwealth higher education authorities, WAPSEC, relevant government ministers, grant foundations and companies.⁶

An important aspect of his case involved Commonwealth acceptance of the right for CAEs to compete with universities for the newly announced centres of research excellence. As well he sought recognition of DOCIT institutions as belonging to a separate category for research funding purposes.⁷ Both CTEC and WAPSEC were very guarded on this issue, being anxious to restrain research development in the advanced education sector.

At State level Watts worked to persuade Premier Court to sponsor the technology park and associated centres. This appeared likely following announcements after the elections of July 1980, which included the release of land at Canning Vale, with possibilities for leasing land to small industries with growth prospects.⁸ The government also established a group to study implications for Western Australia of the Myers Report.

For a time, little was heard about the technology park project from government. Watts maintained the initiative through articles by John Bremer, editor of the Higher Education Supplement of *The Australian*, who visited WAIT in September; through publicity associated with the announcement of a \$831,000 grant to the School of Health Sciences from the Kellogg Foundation; and through personal contacts with CTEC Chairperson Karmel, and the Commonwealth minister for education.

Towards the end of the year, however, the people who were concerned at WAIT sensed the government impetus was beginning to flag. Announcements by the South Australian government of decisions to establish a technology park were keenly felt, since this project was based directly on the WAIT concept. Indeed South Australia's project representatives had visited WAIT for briefings. Watts personally expressed his disappointment at the very lukewarm response in conservative government circles.⁹

Court asked for responses from the State ministers concerned. Industrial Development and Commerce Minister Barry MacKinnon and Education Minister Peter Jones, though supportive, indicated that Watts was partly engaged in seeking alternative sources (to CTEC) of funds for WAIT.¹⁰ Jones made the point:

The WAIT initiative has created the environment for such a concept to develop, but it now requires recognition by industry that what WAIT has to offer is of advantage to it. I feel that WAIT must now sell its wares virtually on a door-to-door basis.

WAPSEC Chairperson Walter Neal advised his minister that WAIT needed to prove its worth to industry. On finances, he warned that, in spite of WAIT's problems, its plant and resources were '...the envy of most other colleges and institutes and some universities throughout Australia'. The institute should not pursue research to the detriment of its role in advanced education, he said.

Running parallel to this debate, the Liberal Government in March 1981 established a Technology Review Group '...to keep the government professionally advised on development and prospects as a guide to policy'. Watts was invited to nominate three members for the group and proposed himself, de Laeter and council member Wilfred Ewers.¹¹ De Laeter's contributions included introducing the term 'Technology Park' to describe the WAIT concept, to avoid the 'dirty' image of the word 'industrial'; and the recommendation that priority should be given to 'high technology' firms. He also suggested that the Technology Park be situated on vacant land at Bentley, across Hayman Road from WAIT, not in Canning Vale which was the alternative site being discussed.¹²

On financing—assessed at between \$3.5 million and \$6 million—Watts suggested a staged development. This would initially concentrate the State's relatively small personnel and equipment resources within a building shared by Commonwealth and State departments, companies and key research centres. Many of these had already indicated an interest in locating at Bentley, for example the Australian Mineral Development Laboratories (AMDEL); the Mineral Chemistry Division of CSIRO; and parts of the Commonwealth Ministry for Science and Technology. Such other bodies as the Systems

Research Institute of Australia, the Confederation of Western Australian Industry's projected Products Development Unit, and other services also might co-operate. This more modest proposal followed a visit overseas by Watts in July to enable him to measure WAIT's scheme against successful models functioning in North America.¹³

Finding money for the centre for applied science and technology meanwhile proved almost impossible, inducing Watts to complain about the exclusion of CAEs from participation in the centres of research excellence. Responding, the Commonwealth compromised by permitting colleges to combine with universities in making bids for centres.¹⁴ De Laeter followed this up, with co-operation from UWA and the Geological Survey, seeking establishment of a Western Australian centre for isotopic studies. The application, however, was unsuccessful.

Under the circumstances, it was clear that capital for the proposed centre for applied science and technology would have to come from outside bodies. Submissions for assistance to CTEC and WAPSEC failed to attract support, but at the same time confidence was growing in the Technology Park and centre proposals. Urged strongly by de Laeter, who was chairperson of the State committee of CSIRO, the Division of Mineral Chemistry of CSIRO in 1982 concluded agreements with WAIT to establish a surface chemistry laboratory in extensions to the applied science building—a move that was supported by both UWA and Murdoch University.¹⁵ Dr Terence Pyle organised the establishment at WAIT of a research sluice and spiral test rig used in a project with Nimbecon Services Pty Ltd. This resulted in the renting of accommodation at Bentley to the Australian Coal Industry Research Laboratory.¹⁶

Within the State government, however, discussions dragged on until Minister for Industrial Development and Commerce MacKinnon (just returned from a tour of technology parks in the United States of America—a trip Watts had facilitated) announced in July 1982 his intention to ask State Cabinet to establish a Technology Park on the thirty-two acres at Bentley, close to WAIT.¹⁷ The Technology Review Group advised, however, that ten acres should be developed immediately with the remainder held in reserve for later expansion. De Laeter's proposal of 1981 had at last won official acceptance and none too soon, since comparable parks being approved in other parts of Australia were threatening to capture the attention of a number of companies which had been waiting for action in Western Australia. Congratulations came pouring in from organisations and companies, acknowledging the energy and time Watts had expended on the project.¹⁸

De Laeter also figured prominently. During 1981, at the request of the Commonwealth Department of Science and Industry, he accompanied a group of graduates on a tour of Silicon Valley in California. On his return, he used speaking engagements at UWA's Summer School to publicise what was happening in research and development parks around the world. Later, he also was involved in the 1982 State Adventure Workshop, held in Perth under the aegis of the WACAE.¹⁹

The O'Connor Government in February 1983 established a Technology Park Management Board, which took over from WAIT the extensive range of inquiries from companies and governments interested in leasing space in the park.²⁰ As it happened, formation of the board came too late to make any impact on the election prospects of the Liberal Government, which in March lost office to the Labor Party, led by Brian Burke.

Labor Government and Technology Park 1983–1986

Malcolm J. Bryce, deputy premier in the new government and minister for economic development and technology, was a keen student of technology policy. Nationally the Labor Federal Government was also committed to a comprehensive technology policy, owing greatly to the vision of Minister for Science and Technology Barry Jones, whose book 'Sleepers Wake!' proved influential at the time.²¹ In Western Australia Bryce implemented a policy that included the establishment of a Technology Directorate charged with promoting, co-ordinating and rationalising the State's high technology enterprises and government services. Part of that responsibility also involved the establishment of a Technology Park.

Watts and de Laeter (who had taught Bryce at Bunbury High School) played significant roles in acquainting Bryce with the whole scheme, and helped persuade him that a technology centre should be the nucleus of the new park. In it would be housed the Technology Directorate, a number of Commonwealth government and State government departments, and other agencies concerned with science and technology. Both Watts and de Laeter also helped arrange an itinerary for Bryce when, in July, he travelled overseas to visit technology parks in North America, Japan and Britain.²² On his return, Bryce introduced a Science and Technology Forum series of seminars, the first delivered by Barry Jones in August.

During July also, the government announced decisions to establish Technology Park at Bentley, with an immediate start to be made on construction of a \$3 million Technology Centre and the area of the park being increased from thirteen to thirty-two acres.²³ The centre would house the Technology Directorate, the offices of several government departments, the Product Innovation Centre and a number of interested companies. Dr John Barker was appointed executive director of the park, which was officially opened at a ceremony on 24 July 1985.

The groundwork laid by de Laeter and Watts received recognition at both State and Commonwealth levels. De Laeter, for example, was appointed in 1984 as chairperson of the State's Science, Industry and Technology Council, and in 1986 he was named Citizen of the Year in Western Australia. A street in Technology Park carries his name. As for Watts, the Labor Commonwealth Government in 1984 appointed him to a three-year term as a member of the Australian Science and Technology Council, a singular achievement since he was the first Western Australian to be so appointed.²⁴

Product Innovation Centre

The Product Innovation Centre, established in 1983, owed its genesis mainly to work by Leahy, Pyle and Dr John Chambers, although it was Frank Malone, of the Confederation of Western Australian Industry, who helped refine the concept, hawking it around government and industry in search of financial support. The O'Connor Government shied away from the scheme, however, convinced on ideological grounds that it should be left to private enterprise.²⁵ The Commonwealth, on the other hand, indicated in January 1983 that it would support the project. Malone in February eventually marshalled the interested parties for a briefing, after which he gained backing from WAIT, the two universities and the State government and Commonwealth government.²⁶ A company was then formed, the Western Australian Product Innovation Centre Pty Ltd, with T. J. Perrott as chairperson, and as director, Dr Peter Dallimore, whom WAIT seconded from the School of Physics and Geosciences. Dallimore, holding a PhD from Oxford University and an MBA (master of business administration) from UWA, had spent several years in research before joining WAIT in 1974. The Product Innovation Centre was initially located next to de Laeter's office in the Division of Engineering and Science, but moved to Technology Park when it opened in 1985.

By that stage the centre had already assessed eighty-five proposals (out of some 200 enquiries). Financial support during 1984 had considerably improved with \$80,000 provided by the Commonwealth, \$20,000 by the State, \$15,000 from local industry, \$5,000 from the Rural and Industries Bank, and \$5,000 from each of the State's tertiary institutions. Early initiatives included seminars on inventions and patents held in Perth, Merredin and Bunbury, and the Western Australian Young Inventors' Exhibition. The centre in later years also introduced seminars on entrepreneurship.

Westintech

The umbrella Technology Centre was intended to house another key element in the whole circle of innovation and development: a management investment company called Westintech Innovation Corporation Ltd. The company had been formed in 1983 to bid for one of seven licences issued by the Labor Commonwealth Government under legislation to encourage the investment of venture capital in new technology companies. Chaired by Sir Laurence Brodie-Hall, the company brought together sixty of the State's leading businessmen and investment advisers to form a consortium that became the only new company to obtain one of the licences. WAIT joined as a founder member, along with UWA, subscribing \$10,000 from Special Funds.²⁷

WAIT Research and Development Centres

Engineering and science

At the time Watts commenced the restructuring of WAIT, the School of Applied Science led the research and development field at WAIT. Several

research and development groups were already in operation, providing a significant base on which to build during the 1980s from within the new Division of Engineering and Science.

One of these new initiatives, a cloud-seeding study led by Dr Ian Ball, Dr P. J. Rye and Dr Warren Walker, started with a grant of \$150,000 from the State government and a group of farmers in 1980. The project, which eventually brought \$500,000 into the School of Physics and Geosciences, also generated beneficial publicity for applied research and development at WAIT.²⁸

Another project, associated with the installation in December 1980 of a second parabolic satellite antenna on the roof of the civil engineering building, formed part of a joint CSIRO–WAIT study to collect and interpret data from the National Oceanic and Atmospheric Administration Satellite, and from the Television Infra-Red Observation Satellite. The project, combining signal collection at WAIT and computer processing by CSIRO, enabled the real-time collection of multispectral data of the earth's surface on a daily basis, whereas delays of six to eight weeks had previously been typical. The processed information assisted the cloud-seeding project, enabled measurement of marine temperatures and facilitated measurement of ground moisture content.²⁹

Remote sensing work by the Department of Surveying and Mapping and the School of Electrical and Electronic Engineering used a RAMTECH image processor in conjunction with computer processing by Frank Honey of CSIRO to translate LANDSAT images.³⁰ The work had many applications including joint research with CSIRO into sea temperatures for Australian fisheries. Dr Bill Collins established a Satellite Imagery Unit in the School of Electrical and Electronic Engineering, which attracted more than \$100,000 over three years from government and the fishing industry. One of its spectacular successes was in mapping a volcanic ash cloud over Indonesia during 1982 which enabled aircraft to avoid danger areas.³¹

In geophysics WAIT built upon an already established base from the 1970s that was greatly assisted by the purchase of a state-of-the-art solid source mass spectrometer.³² This equipment, which had been the subject of extended negotiation between WAIT, the Commonwealth government and the State government, was finally funded by the ARGC (\$170,000), and WAMPRI (\$70,000) which the State government had established in 1981. Recruitment of Dr R. Pidgeon as a principal lecturer in physics and geophysics enabled the School of Physics and Geosciences to capitalise further on the work of de Laeter, K. Rosman and others, in a mass spectroscopy unit to advance research work in geochronology and interdisciplinary studies in mining. In 1982 external funding topped \$2 million to provide a base for work on radiometric dating, nuclear physics, meteorite studies, isotope abundance studies and stable isotope mass spectrometry.³³

The establishment in 1983 of an Exploration Seismology Unit at WAIT was the outcome of similarly organised co-operation between WAIT, the State government and the major professional groups involved in exploration

geology.³⁴ Donation of a field research unit worth \$100,000 by the Australian subsidiary of Geophysical Service Inc. (Texas), in turn, led to links with the Allied Physical Laboratories of the University of Houston—world leaders in the field.³⁵

WAIT research work in applied chemistry built upon an excellent base from the 1970s laid by Dr R. B. Alexander and Dr R. Kagi. During 1982 they received funds from WAMPRI for a project on the petroleum geochemistry of the Canning Basin and Bonaparte Gulf Basin in the North-West, and they also shared with Murdoch University's Mineral Chemistry Research Unit grants enabling dissemination of the latest research information on gold-processing technology for the Australian mining industry.

In 1982 Dr Jeff Dunn won the first WAMPRI grant for work into the oxidation of nickel and iron sulphides. This led to work backed by Western Mining Corporation, which saved an estimated \$2 million in the company's smelting operations at Kambalda. Co-operative projects with the Department of Chemical Engineering involved the construction of a micro-smelter. Another project was to test coatings for the Dampier–Wagerup gas pipeline.³⁶

In the field of industrial chemistry, co-operation with science and industry organisations was critical to agreements with the CSIRO, which in 1984 located its Surface Chemistry Laboratory at WAIT (opened in July by Minister for Science and Technology Barry Jones).³⁷ This development was crucial to Watts' success in establishing at WAIT a Department of Chemical Engineering, to which he had allocated a high priority in view of the State's massive petroleum gas project developments in the North-West. The financing was a complicated mixture of grants from industry—\$203,000 given jointly by Alcoa of Australia Ltd, CSBP and Farmers Ltd, Western Mining Corporation, WAPET, Swan Brewery, Cockburn Cement, CIK Australia Pty Ltd, and Millars (WA) Ltd—and from CTEC (\$175,000 as a development grant).³⁸ The outcome was the establishment of a new chemical engineering department in 1982, headed by Dr Terence Smith. Smith, who was from the University of Adelaide and had an extensive background of industry and academic contacts in Germany and Canada, was appointed at head of school (Campbell classification)—professorial rank with the aid of a \$40,000 grant for each of the first three years of the appointment, made by Alcoa of Australia Ltd.

Chemical engineering formed part of a new School of Process Engineering that also included departments of mechanical engineering and metallurgy. The new school was formed in 1980 after tortuous negotiations with the School of Mines about the future of metallurgy. WAIT's inaugural head of the Department of Mechanical Engineering, W. L. A. Munro, who had started chemical engineering back in the 1970s, took a cynical view of the new development. On the occasion of his retirement in 1982, he contended that WAIT had never sufficiently supported chemical engineering in the past and that the School of Process Engineering '...was formed as a convenient administrative and funding unit within which the difficulties associated with operations in a reformed Department of Metallurgy on the Bentley site might be concealed if not solved'.³⁹



1 & 2 Acting Premier Malcolm J. Bryce launched the Technology Park project in March 1984 by unveiling a plaque at the site where the Technology Centre was to be constructed.

3 Weighing several tonnes, a one-fifth scale model of the Woodside Offshore Petroleum underwater plough developed in association with WAIT-AID was unloaded at WAIT in September 1983.

4 Industrialist Frank Malone (*left*) and chemistry head Dr John Chambers helped form the WA Product Innovation Centre, established in 1983 to assist inventors.

5 Senior Lecturer in Applied Chemistry Jeff Dunn (*rear*), awarded the first research grant by WAMPRI, with visiting British colleague Amara Jayaweera, from Plymouth Polytechnic.

6 A computer photograph from satellite readings shows the volcanic ash cloud off WA's North-West coast which WAIT's Satellite Imagery Unit tracked after an eruption in Indonesia in 1982.

Pyle acted as head of the School of Process Engineering until the position was filled by Dr Richard Horsley in April 1984. Appointed at the head of school (Campbell classification) level, Horsley came from the RMIT. The Victorian institute, together with WAIT, had operated a combined Slurry Research Group, which mainly focused on the use of patented modifications to a Haake viscometer to assist analysis of gold ore slurry for its rheological qualities. The work, which attracted great interest during the gold boom of the period, involved co-operative research between Horsley, Lecturer in Mechanical Engineering John Miller, post-graduate student Scott Barnham and Senior Research Fellow David Allen.⁴⁰

The arrival of Smith in the Department of Chemical Engineering, combined with co-operative ventures in mining research, led in 1983 to the formation of a Mineral Technology Unit. This involved staff from the School of Applied Chemistry and the Department of Chemical Engineering at Bentley, and from the extractive metallurgy area at the School of Mines.⁴¹ Aided by a grant from Watts' discretionary reserve, the unit engaged Allen to create contacts with industry and prepare proposals for financial support.

Dr Ian Fairnie, Dr Clyde A. Smith's successor at Muresk, took advantage of the restructuring of 1984 (see Chapter 9) to reassess Muresk's relationships with the agricultural industries. As a first initiative he established the Muresk Extension Service. This became a significant element within the Clyde Smith Rural Management Centre, which was formally opened on 2 July 1985 by State Minister for Education and Planning Robert (Bob) Pearce.⁴² Later in the year WAIT followed up these thrusts by establishing, with the assistance of Wesfarmers Ltd, a professorial position at Muresk. Dr David Bennett, formerly of the Land Resource Policy Council of Western Australia and of the CSIRO, received the first appointment as the Wesfarmers Professor of Rural Management.⁴³

Centre for marine science and technology

A Centre for Marine Science and Technology, which was established in 1985, built upon foundation work in the 1970s by Dr John Penrose, Tom Docherty (a specialist in underwater vehicle engineering) and others. A spectacular contribution was associated with the development of a huge underwater plough for the North-West petroleum gas fields off-shore from Dampier. This work was undertaken through WAIT-AID for Woodside Offshore Petroleum Pty Ltd by WAIT staff in the Faculty of Engineering, the School of Computing and Quantitative Studies, the Department of Geology and Geophysics, and the Educational Media Centre. WAIT helped develop the concept and construct working models of the plough which, when completed in 1982, was twenty-four metres long and weighed nearly 200 tonnes.⁴⁴

Funding for the new centre started with grants by the Parry Corporation, which in 1983 was preparing to challenge for the America's Cup, a famous yachting contest to be held off Fremantle in 1985 and 1986. The intention was for the centre to commence work with research into technological,

oceanographic and meteorological problems associated with the Cup defence, and then broaden out into the wider fields of marine science and technology. The proposal was opposed on ethical grounds by some WAIT academics who feared the public reaction to obtaining money in connection with a yacht race for millionaires. WAIT Council went ahead, however, on assurances of support from State Minister for Education Pearce.⁴⁵ Opened in March 1983, the centre has been associated since then with a unique post-graduate diploma course in maritime archaeology started in 1986 by Penrose, and also with studies undertaken by lone, round-the-world sailor Jon Sanders, in his epic journey of 1985.⁴⁶

National centre for teaching and research in school science

Dr John Dekkers, the inaugural head of the Science and Mathematics Education Centre, resigned in 1983. Watts and de Laeter took the opportunity to effect a closer connection between the centre and the Faculty of Education by appointing as the centre's director Dr Barry Fraser, then head of the School of Curriculum Studies in the Faculty of Education. Fraser, an international figure in the fields of science education and evaluation, helped to establish a fine reputation for the work of the centre.⁴⁷ Centre staff have been heavy contributors to Australian professional conferences and the centre has hosted a succession of international visitors since its creation.

In 1987 Fraser took up a challenge from CTEC, which had recommended the establishment of a key centre in Australia devoted to women in mathematics, science and technology. Under the name 'National Key Centre for Teaching and Research in School Science and Mathematics (Particularly for Women)', WAIT's bid for this centre proved successful, marking another significant achievement. It was the only centre approved in the field of education, and WAIT's submission had faced strong competition from several of Australia's older universities. Earlier, in 1985, the Science and Mathematics Education Centre had been successful in attracting Commonwealth funds to develop bridging courses for Aboriginal students in science and mathematics, as well as for research into the special learning problems of Aborigines in these disciplines.⁴⁸

Key centre of teaching and research in resource exploration

WAIT's Key Centre of Teaching and Research in Resource (Petroleum) Exploration started from a successful submission to CTEC for one of the National Key Centres for Teaching and Research announced by the Commonwealth in 1984.⁴⁹ These were intended to emphasise teaching-learning as well as research and development. The WAIT submission envisaged a centre established jointly with the State government, with responsibilities for training geoscientists in the techniques of petroleum exploration, performing research into the techniques and problems of petroleum exploration, and co-operating with industry and government in the promotion of petroleum activities. It was



1 Commonwealth Minister for Employment, Education and Training John S. Dawkins opened the Landmark Research Laboratory in 1987.

2 Lone yachtsman Jon Sanders at the rudder of the *Parry Endeavour* leaving Fremantle in 1986 on the first leg of his triple circumnavigation of the world. The vessel carried sophisticated scientific equipment to collect data for WAIT's Centre for Marine Science and Technology.

3 Businessman Kevin Parry (*right*) handing a cheque to WAIT Director Dr Don Watts at the official launching of the Centre for Marine Science and Technology, March 1985.

intended that the centre would draw together activities in geology, geophysics, geochemistry, remote sensing, physics and marine science, engineering, mathematics and computing, as well as those in the School of Mines.

John S. Dawkins, the new Commonwealth minister for employment, education and training, formally opened the Landmark Research Laboratory on 30 October 1987. Earlier, WAIT had appointed Professor John Scott to the Chair of Petroleum Geology, while de Laeter served as director of the centre. After a review in 1988 the centre's funding was renewed for a second period of three years.⁵⁰

Health sciences

At the forefront of the School of Health Sciences in 1980 was the Kellogg Foundation-financed Centre for Advanced Studies. This focused on three areas: formal post-graduate courses, continuing education for health professionals, and research studies on health problems and related issues of community concern.⁵¹ The Kellogg grant of \$837,000 was intended to cover costs of appointing core staff, secondment of institute staff, graduate scholarships and fellowships, visiting fellows, research assistants and other supporting resources.

Announced in June 1980, the Kellogg grant provided a welcome boost to WAIT's research and development thrust at the time of Watts' appointment; and made an instant impact in building up the health science graduate programme to masters degree level for educators, administrators, clinicians, researchers and other health professionals.⁵² Post-graduate enrolments in the School (later Division) of Health Sciences increased from ninety-nine (1981) to 228 (1985), largely as a result of this stimulus. On the research side, the division introduced a research and evaluation service for health-related research projects, including care of the elderly, occupational safety and health, toxicology and community development needs.⁵³ These projects also attracted more than \$200,000 in other external grants.

At the end of the three-year programme, which was well reviewed by the Kellogg Foundation, Watts nominated Dr Marc Liveris for a Kellogg International Fellowship, which was awarded in 1986.⁵⁴ Liveris won other community recognition for his work in the health sciences, for example an OBE (Officer of the Order of the British Empire) in 1982 and the Citizen of the Year award in 1985. Other school staff to enjoy the benefits of study under Kellogg Fellowships included Rodney Corker, Robert Dunstan, Dr P. Clements, J. McCarthy, J. Coolahan, Vera Rouhianinen and Vivienne Dench.

A second major health sciences centre developed out of activities commenced within the Kellogg Centre for Advanced Studies. Dr Stan Kailis (pharmacy), building on work started in the 1970s, proposed the establishment at WAIT of a Drug Usage Research Centre.⁵⁵ During 1986 these efforts took a quantum leap following the allocation of \$360,000 annually for three years to establish a National Research Centre in the Prevention of Drug Abuse.⁵⁶ The

focus of activity of the centre was on research methods to prevent drug dependence, and it built upon existing studies of drink-driving and alcohol abuse, undertaken in the Division of Health Sciences. The new centre also became the co-ordinator for a World Health Organisation international study on alcohol education for young people, headed by Community Health Lecturer John Fisher.

Among WAIT's health science schools few could boast the research and development record of the School of Medical Technology, which in the 1980s generated a new emphasis on biotechnology, led by Dr John Wetherall, Warren Grubb and David Townsend. This led not only to new undergraduate and post-graduate degree programmes but also, on the research side, the production of monoclonal antibodies for medical and veterinary use. Over a four-year period from 1981 the school gathered grants and contracts worth more than \$800,000 and established its own Biotechnology Centre as a focus for its research and development activities.⁵⁷

Several other health science research and development centres also emerged in the 1980s. They included a Centre for Applied Psychology (which coincided with the start of a master of applied psychology degree), a Centre for Clinical Evaluation Research for Independent Living (occupational therapy) and a Centre for Health Promotion Research. During 1984 the School of Physiotherapy established a Centre for Applied Research in Exercise Science and Rehabilitation. In 1988 this attracted a grant of \$273,000 from the Medical Research Authority of Western Australia for a joint study with the Royal Perth Hospital into functional electrical stimulation in spine-injured patients.⁵⁸

Business and administration

In the Division of Business and Administration, Head of the Department of Computing and Quantitative Studies George Kelly initiated the establishment of a Business Systems Centre in 1981, envisaged as a joint venture between WAIT and NCR Australia Pty Ltd.⁵⁹

The departure from WAIT of Kelly was perhaps the key to the centre's failure. It proved unable to attract business and so quickly fell into debt. The Division of Business and Administration absorbed centre operations, merging it with the Centre for Business Research and Development.⁶⁰ This had started in 1981 on the initiative of Dr M. J. Vertigen, with a role focused mainly on management development and planning consultancies, seminars and short courses (especially in Southeast Asia).⁶¹ By this time merged centres were self-supporting and revenue was rising steeply.

In connection with computing WAIT established in 1985 a Centre for Information Technology and Systems Research, the outcome of initiatives taken by de Laeter in 1984 to pull together all the different parts of WAIT that were now heavily involved in computing education, research and development. The centre's objects were to promote multidisciplinary teaching and research.⁶²

Arts, education and social sciences

Within the Division of Arts, Education and Social Sciences, the School of Architecture and Planning began the 1980s with a Centre for Architectural and Planning Research, established during 1979. It provided a focus for studies of public housing in Western Australia, computer-aided drafting tasks for such bodies as the CSIRO and the Public Works Department, and other consultancies.⁶³

In the social sciences the development of centres took longer than in the technologies and applied sciences, partly because of the difficult staffing and financial conditions. The idea for an interdisciplinary Indian Ocean Studies Centre gradually developed out of an international conference on Indian Ocean studies held at Perth in 1979 as a joint venture between WAIT, UWA and Murdoch University. At WAIT Dr Kenneth McPherson was especially active in the field, having developed a course in Indian Ocean history in 1976. Derek Holroyde introduced an Indian Ocean Information Unit in the Centre for Communication and The Arts, and McPherson co-operated with UWA in the publication of the *Indian Ocean Newsletter*.⁶⁴

The Centre for Indian Ocean Studies, although raised tentatively as a concept by McPherson and Dr John McGuire in 1981, was not formally established until 1986. Under McPherson's direction and with support from Dr Peter Reeves (then associate director of the division), the centre's activities in history, maritime and trading relations, culture, politics and economy quickly earned WAIT an international reputation.⁶⁵

The Western Australian Social Sciences Education Consortium meanwhile drew McPherson, Dr Kerry Kennedy and Dr Gil McDonald together on a school curriculum project on migrant groups in Western Australia for the Institute of Family Studies.

The other main initiative from the division was the establishment in 1984 of the Centre for Australian Studies.⁶⁶ Originating out of work by Dr Brian Dibble and Don Grant during the 1970s, the centre's activities have included the compilation of a directory of Australian Studies materials and teaching at WAIT itself, seminars in the arts and literature, and submissions to a national review of Australian Studies in tertiary education.

Aboriginal studies

The Centre for Aboriginal Studies began life in 1975 as a unit within WAIT-AID concerned with courses for Aboriginal liaison officers, an Aboriginal bridging course, an alcohol counsellors' course and a supportive agency for Aboriginal students called the Aboriginal Enclave. Derek Holroyde, as dean of the arts and design, strongly supported this work, adding his own drive behind an Aboriginal Arts Festival held at WAIT in 1983.⁶⁷

In 1985 the Aboriginal Studies Unit (its original name) was renamed the Centre for Aboriginal Studies and was brought under the administrative wing of the Division of Academic Affairs.⁶⁸ Vic Forrest was appointed planning

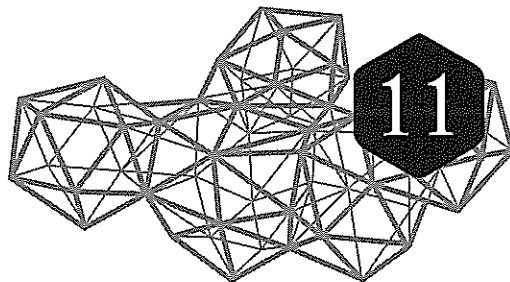
officer charged with developing a blueprint to include an Education Unit responsible for the bridging and liaison officers' course, an Enclave Unit supporting Aboriginal students, and a Community Service Unit.

A Research and Development Culture

Establishment of Technology Park and the research centres reflects only the most visible elements of the research and development culture which increasingly permeated WAIT in the 1980s. The record presented here, moreover, is highly selective. It does not mirror the general staff commitment to research and publication during these years. Staff reward systems (promotions in particular) provided a necessary motivation, although Watts' personal recognition of research achievement was another telling incentive.

The present chapter also misses recording the many publications and conference presentations that are recorded in *Techne* from the time of its release in 1978. This observation is especially true of the social sciences-related fields including education, where large research grants are not the norm. Nor does the chapter reflect WAIT's prominence in the arts, although regular exhibitions and awards in these areas often received more public attention than the applied sciences and technologies.

The drawback where WAIT staff were concerned was that they moved into research and development in spite of the predominant teaching ethos of the advanced education sector. Compared with their university colleagues, advanced education staff lacked a built-in research loading with each enrolment, and were generally obliged to teach for longer hours. This was a formal characteristic of the Commonwealth's binary philosophy, of course, though one that drew complaint from advanced education staff. Watts vigorously pursued their cause in the interests of promoting the applied research and development missions at WAIT. As will become clear in the next two chapters, heat generated by frictions within the higher education system reached breaking point in the mid-1980s.



Binary Frustrations

Upon reflection on most of the developments dealt with in Chapter 10, it is apparent that research and development at WAIT during the 1980s was driven against the prevailing winds of government policy on higher education. At the local level WAIT's aspirations also ran counter to State policy (after the Birt Report) to contain growth at WAIT and UWA in order that Murdoch University and the former teachers' colleges could expand to economic sizes. CTEC initially acquiesced in this approach, although clearly preferring an amalgamation of the two universities and also of the four advanced education (teachers') colleges.¹

CTEC also endorsed State government intentions, with the support of WAPSEC and of WAIT itself, for the Institute of Technology to concentrate more on the applied sciences and technology.² Falling student numbers in the social sciences in fact confirmed that shift, without the need for a great deal of political intervention, although business and administration not only retained enrolments, they emerged as highly sought-after programmes in the 1980s.

At the political level economic conditions precipitated major upheavals in Australian higher education, highlighted in the Review of Commonwealth Functions in May 1981.³ The outcome was not only reductions in expenditure on higher education generally, but more particularly for Western Australia the amalgamation of the former teachers' colleges to form a multi-campus college (WACAE). Overnight the number of higher educational institutions in Western Australia was reduced from seven to four, with the WACAE established as the third largest institution in the State. Draconian measures on this scale were perhaps overdue, but they coincided with such other radical measures as a six-month freeze on salaries and announced intentions to reintroduce tuition fees for second degree and post-graduate courses. The outcome nationally and in Western Australia was a furore in academic staff associations and student unions that, nonetheless, achieved very little. Student unionism, as already mentioned in earlier chapters, was a continuing issue.

All this lay in the background to expectations of better times once the Labor Party again won power in Canberra, since its public statements had been very critical of conservative higher education policy. During February 1983 the Burke Labor Government came to office in Western Australia, leading by only a few weeks the election of the Hawke Labor administration in Canberra. Locally Robert (Bob) Pearce was appointed to the education portfolio. Nationally the Ministry of Education went to Senator Susan Ryan. Higher education policy afterwards underwent significant reforms, though not in directions that most academics had anticipated.

To understand the frustrations experienced at WAIT during the period, the wider framework of higher education policy needs to be further viewed in the context of changes to WAPSEC. If Dr Walter Neal's period as chairperson had been thought controversial, the period under his successor, Dr W. A. (Bill) Pullman, from the WAIT point of view was perhaps even more so. Pullman's stormy relationship with Dr Don Watts spilt over into WAPSEC policy regarding the containment of WAIT and UWA. This was a State government priority which WAPSEC was expected to implement and indeed would have done so even had Neal continued as chairperson. For Watts, moreover, protocol required him to deal with governments and CTEC through WAPSEC. As a consequence, Watts inevitably became frustrated at what he viewed as blocking tactics in WAPSEC, where his vision for WAIT in the 1980s ran counter to existing policy on advanced education and, in particular, the role of WAIT. The universities, by way of contrast, dealt direct with CTEC and experienced little direct interference from the local co-ordinating authority.

Restrained Growth at WAIT 1980–1984

Driven hard by the director's enthusiasm, the research and development and community-related programmes at WAIT in the early 1980s can only be described as outstanding for an institution battling against financial odds throughout the period. The new thrusts were forced against a static and even diminishing recurrent budget in real terms, negligible expenditure on new buildings, inadequate support for major equipment and maintenance, severe constraints on staffing levels, and even the active discouragement of CTEC and WAPSEC, the two bodies co-ordinating higher education.

Table 11.1 on the opposite page reports WAIT expenditures between 1980 and 1987. Table 11.2 lists the major capital developments of the period (most financed from external funds).

In a period of static and falling recurrent budgets, enrolment in the applied sciences and technologies and even in the health sciences (till the nursing surge of 1985) increased only marginally, and then against severe quota restrictions on business and administration, the humanities and the social sciences. Given the enrolment strength in the latter fields (with notable exceptions), the only avenue open—to achieve growth in the sciences and technologies as well as boost applied research—was to redirect internal resources away from the

TABLE 11.1 Expenditure at WAIT (\$), 1980-7

Year	Capital	Recurrent	Special Funds
1980	784,136	36,393,869	3,453,969
1981	1,457,177	42,716,827	5,887,043
1982	2,951,068	47,815,443	6,339,999
1983	1,149,165	50,709,189	7,011,469
1984	768,301	56,282,472	10,594,350
1985	1,123,432	57,586,923	8,863,058
1986	2,871,885	65,138,147	12,586,703
1987	6,578,656	70,892,050	not reported

Source: WAIT-Curtin University of Technology, Annual Reports, 1980-7.

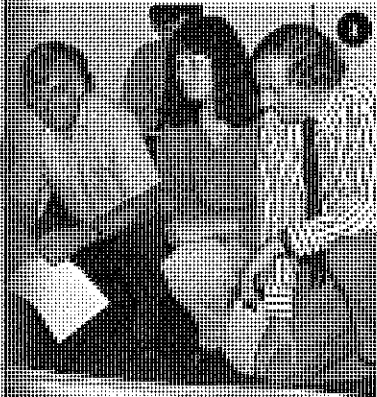
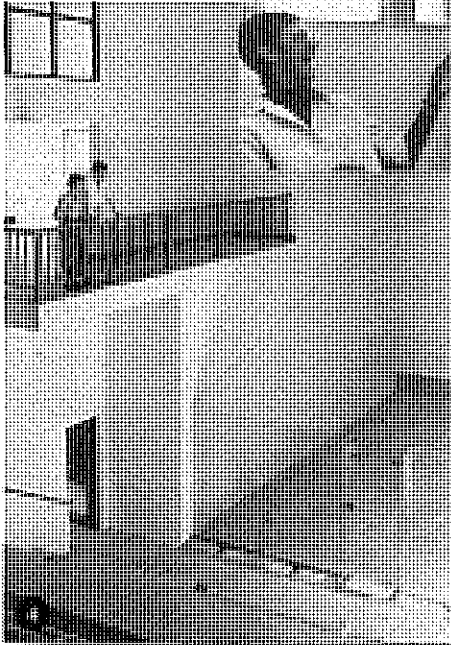
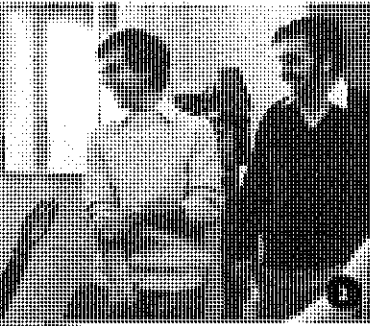
TABLE 11.2 Major building projects, 1980-7

Year	Building
1980	Health sciences, therapy extensions
1981	School of Mines technology building Squash courts
1982	School of Mines technology building WAIT House
1983	School of Mines technology building WAIT House CSIRO chemistry building
1984	Minor building projects
1985	Minor building projects
1986	Nursing building (State grant \$1,644,089)
1987	Nursing building (State grant \$3,811,295) Science and technology building Fourth-floor additions to art and design, and education

Source: WAIT-Curtin University of Technology, Annual Reports, 1980-7.

divisions of business and administration; and arts, education and the social sciences. The results were evident in high student:staff ratios and hours taught in these fields. Although perhaps advantaged on this count, the applied sciences and health sciences were particularly successful in attracting external research and development funds.

There was no escaping the resentment generated by the financial situation in the social science-based and business areas. The impact on business was especially severe, since it proved almost impossible to retain staff against demand and income levels in the marketplace. Moreover, the introduction of computing as a major feature of business education changed it into a heavily equipment-oriented field, demanding resources comparable with many of the sciences. In the circumstances, WAIT's financial priorities contributed to morale problems among staff in the non-science and non-technology fields,



1 Editor-in-chief Bob Duffield (*left*) and Media Lecturer John Fiske, of WAIT's School of English, inspecting the first edition of *City Focus*, launched in August 1982.

2 Primary teacher Judy Pannell shared a joke with WAIT lecturers Dr Kerry Kennedy (*centre*) and Dr Gil McDonald (*right*) at a Faculty of Education in-service course, 1982.

3 A founder of WAIT's Centre for Australian Studies, English Lecturer Don Grant (*left*) in 1979 looking at a map of tribal boundaries of Aboriginal Australia with visiting historian Professor Geoffrey Blainey (*right*) and a student.

4 Five new glass-backed squash courts opened in 1981 included an international standard exhibition court. Recreation Officer Alan Marshall (*right*) inspected the new court with Christine Fearnley, one of WA's top squash players.

including the stress of dealing with redundancy, possible transfer from WAIT into other institutions, and rising work loads of the remaining staff.

An analysis of graduation trends in 1987 undertaken by Dr A. Gallagher, who spent time at WAIT on leave from CTEC, revealed two significant trends in WAIT's academic profile:

1. Between 1976 and 1986, masters level awards had risen from 0.1 per cent to 2.7 per cent of total awards. At the graduate diploma level the comparable percentages were 14.1 and 19.6. In all, post-graduate awards over the decade had risen from 14.2 per cent to 22.3 per cent.
2. At the undergraduate level, degree awards conferred as a proportion of total awards had risen from 47.3 per cent to 67.5 per cent between 1976 and 1986. For diploma level awards (UG2) the comparable percentages had fallen from thirty-three to 6.5. Associate diploma awards, 5.5 per cent of total awards in 1976, stood at only 3.7 per cent in 1986.⁴

In sum, WAIT had undergone a significant shift upwards in its academic profile. This trend, repeated across Australia in most of the major CAEs, drew adverse comment from governments committed to the binary conception of higher education. Yet this was the very philosophy which the colleges sought to modify and the universities to preserve. From the time he joined WAIT in 1980, Watts challenged the restrictions imposed on the major colleges, though he was prepared to work within the binary system. However, when that system proved stultifying where the potential of the advanced education system was concerned, he eventually moved, along with his fellow directors, to change it.

In comparison with other major colleges in Australia, WAIT by 1986 possessed the highest student load and enrolment at the post-graduate level. Indeed post-graduate students at WAIT accounted for one third of all the post-graduate students in the five comparable institutes combined. Mirroring a similar situation, Commonwealth post-graduate awards granted to advanced education were paltry in number compared with those given to Australia's universities. Of the thirty awards available to the colleges in 1986, WAIT students obtained eleven. Another twenty-five students received full or partial support from industry-sponsored scholarships. Between 1984 and 1986, enrolments in masters degrees undertaken by research, as a proportion of all masters students, increased from 17.4 per cent to 45.9 per cent. In 1986 nearly half the masters students were concentrated in research/thesis work, and this trend continued into 1987. Implications for the emergence of a modest doctoral programme were obvious.

Yet another indication of WAIT's post-graduate orientation, as compared with the other major institutes of technology, may be found in the flow of research grants from competitive grant schemes during the 1980s. Tables 11.3 and 11.4 on the next page, which record the sums involved, also show the rapidity with which the other institutes improved their position over the period.

Gross figures for research income for the years 1984–7 (Table 11.5) graphically illustrate the research activity in the divisions of engineering and science, and of health sciences.

TABLE 11.3 Competitive research grants from the National Health and Medical Research Council (\$k), 1984–9

Institution	Year					
	1984	1985	1986	1987	1988	1989
WAIT–CUT	27.9	28.4	57.8	92.8	67.1	104.5
QUT	-	14.7	12.5	52.0	64.3	76.2
RMIT	-	-	-	-	45.4	72.8
SAIT	-	-	-	-	33.1	34.5
UTS–NSWIT	-	-	-	-	-	-
TOTAL	27.9	43.1	70.3	144.8	209.9	288.0

Source: Curtin University of Technology, *Weekly Bulletin*, 3 February, 1989.

TABLE 11.4 Competitive research grants from the ARGS and the ARC (\$k), 1984–9

Institution	Year					
	1984	1985	1986	1987	1988	1989
WAIT–CUT	106.8	133.9	169.6	216.5	180.2	648.1
QUT	36.7	36.8	55.8	63.1	111.4	205.9
RMIT	67.6	66.7	58.6	110.6	184.5	349.9
SAIT	19.6	34.2	31.2	41.6	64.4	170.9
UTS–NSWIT	10.8	28.2	42.8	22.9	54.9	90.9
TOTAL	241.5	299.8	358.0	454.7	595.4	1465.7

Source: Derived from Curtin University of Technology, *Weekly Bulletin*, 3 February, 1989.

TABLE 11.5 WAIT–Curtin University of Technology Special Funds for research (\$k), 1984–7

Division	Year			
	1984	1985	1986	1987
Arts, education & social sciences		117,190	125,631	163,837
Business & administration		2,520	13,479	8,783
Engineering & science		1,303,016	1,019,697	1,251,517
Health sciences		241,503	829,141	1,225,430
Muresk Institute of Agriculture		25,663	20,242	5,693
WA School of Mines		31,485	17,727	298,796
Academic affairs		12,134	148,043	141,247
Administration		271	(922)	694
TOTAL	1,840,207	1,733,782	2,173,038	3,095,997

Source: WAIT–Curtin University of Technology, Annual Reports, 1984–7.

Bureaucratic Frustrations

Post-graduate awards

The Commonwealth and State co-ordinating agencies' opposition to the emergence of post-graduate qualifications and courses in advanced education (described earlier) reached a climax in Western Australia following the release of the Ralph Report on management education in Australia (1982). The report concluded in favour of the concentration of élite management training in nationally funded schools at Sydney and Melbourne, and the designation of only one institution in each State as eligible to conduct part-time MBA courses. All other MBA and generalist management courses, moreover, should be discontinued. Locally UWA was the designated institution.

The report drew fierce opposition from the major institutes of technology including WAIT, which had been steadily expanding at the graduate level.⁵ WAIT indeed had plans to introduce an MBA course, if only under the guise of a 'local title' approved by WAPSEC (since such courses were not approved for funding by CTEC).

Frantic negotiations with UWA and the WACAE, supported by WAPSEC, immediately sought a way to preserve college programmes at the advanced management level and strike a division of labour between WACAE and UWA. This approach proved successful, providing for the retention of courses for a complete range of management training, to meet needs of lower and middle management, as well as those of élite university-trained graduates.

WAIT and UWA negotiated a five-year agreement defining respective areas of operation. The university alone would offer the MBA, but it undertook not to introduce graduate diploma programmes except in accounting and finance. WAIT, for its part, would continue to offer general graduate diploma courses and a range of functional specialisations as well as its master of business course. For the most part, the agreement preserved what was already functioning, although it generated impressive exercises in semantics and recognised WAIT's heavy commitments to part-time and external students.⁶

It was not long before the prospect of WAIT awarding doctoral degrees added fuel to the post-graduate award controversies. The matter was raised formally in 1980 by Dean of Academic Services Tom Kennedy, and then taken up by an Academic Board committee chaired by Watts himself, which developed the idea for presentation to the Academic Board in August 1981.⁷ At the time, the board favoured the introduction of a doctor of technology award, but advised extended negotiation with governments, universities and others concerned, to ensure a favourable reaction from external authorities.

Kennedy's paper nevertheless pinpointed the main issues: the need for WAIT to teach to the highest levels if it were to serve industry, commerce and government; the need for a different approach to doctoral work pursued by people working within industry; constraints of tradition and government policy as regards applied research in universities; the fact that in some fields there was no university counterpart to WAIT academic programmes; and the fact that

reopened discussions with the Department of Public Health about the possible amalgamation of the Western Australian School of Nursing and WAIT's Nursing School.¹⁵ He did so on the argument that historically there were close relationships between the two institutions, and their geographical proximity made for less complicated and expensive operations than a split-campus arrangement planned under the proposed contract with the Fremantle Hospital. The proposal was shelved, however, while arrangements were put in hand to transfer nurse education in the hospital schools to WAIT and the WACAE.

The rush of events produced some very difficult years for the Division of Health Sciences, which was forced to accommodate new students before facilities were ready, while simultaneously recruiting new staff, reorganising courses and settling complex clinical supervision arrangements. The growth of nurse education too, tended to perturb the balance between the various schools in the division while exacerbating an already serious budgetary situation at WAIT.

Leadership of the School of Nursing also presented a problem. When Merle Parkes resigned in 1983, the school was headed by Robin Watts until the appointment of Dr Vera Irurita in 1985.¹⁶ Director Watts, with considerable encouragement from the State commissioner for public health, had sought financial assistance from the State government to create a professorial level position in the school as a mark of the new standing enjoyed by nurse education. The post was eventually established at principal lecturer level.

The School of Nursing during the 1980s was responsible for several training innovations.¹⁷ One involved the introduction in 1983 of a graduate diploma course in midwifery, with vigorous support from Ros Denny, director of nursing at the King Edward Memorial Hospital. Her efforts reversed a WAPSEC decision to reject the course when first proposed. In other directions the school quickly extended its operations to such regional community and TAFE colleges as Hedland College, the Great Southern Regional College (Albany) and Geraldton, by way of country contractual agreements. These, under Commonwealth policy to encourage regional tertiary education development, enabled students to complete the first year of the nursing course in a college close to home before transferring to Perth. External studies for registered nurses were extended during the 1980s as yet another important aspect of the school's extension programme. The school's bachelor of applied science (nursing) course was reaccredited in 1986.

On the undergraduate side, another programme absorbed by the Division of Health Sciences in the 1980s was that for dental therapists, previously conducted by the State Department of Public Health.¹⁸ Finalised in 1982, this culminated several years of discussion and was facilitated by the good offices of WAPSEC Chairperson Pullman, and the co-operation of Commissioner for Public Health McNulty. WAIT Director Watts actively promoted the move, which he saw as another opportunity for the institute to merge its activities with the needs of significant sectors of the local community.

Institutional transfer of courses

The transfer of uneconomic programmes to other institutions was the occasion of further frustrations in dealing with the co-ordinating authorities. The initial proposals to support growth at Murdoch University and the WACAE, advanced in the Birt Report, offered one avenue to effect economies at WAIT as well as support enrolment growth in science and the technologies. Discussions in 1982 and 1983, supported by the new minister, Pearce, involved Southeast Asian studies, home and consumer studies, library and information studies, and the visual arts courses.¹⁹

On Southeast Asian studies, extended negotiations aimed at transferring Asian languages to Murdoch University eventually came to nothing, mainly because Murdoch University would not accept the WAIT staff involved. Murdoch University lost a golden opportunity to concentrate Asian language teaching in Perth and to gain a substantial library. On the other hand, retention of the courses at WAIT, in spite of anxieties for the staff concerned and a difficult period with low enrolments, provided a spring-board for considerable strengths when Asian studies recovered its popularity with students later in the 1980s. Watts became angry at the slow pace of events under WAPSEC management and issued an ultimatum to the effect that if by the end of 1983 no decision had been reached, WAIT would go ahead with enrolling students in the programmes.²⁰ Subsequent continuation of the programmes in 1984 provided welcome relief for staff, who had worked under very stressful conditions throughout the extended discussions.

Dr Stephen Hunter was delegated responsibility for negotiating the transfer of home and consumer studies to the WACAE. The discussions did not involve WAPSEC until the very end, in 1985, when the decisions had all been taken. The proposal was not actually opposed in the Division of Health Sciences, nor ultimately by the head of department, Jean Callander (who retired soon afterwards).²¹

With respect to library studies, the original proposal was for the WACAE to transfer its teacher librarian course to WAIT in exchange for home and consumer studies. The idea came to nothing when the WACAE declined the option. In any event, library studies at WAIT received a long-awaited boost from the recruitment in 1983 of a new head of department, Dr Patricia Layzell-Ward, formerly director of the Centre for Library and Information Management at Loughborough University, in England.²²

As for the visual arts, discussion about rationalising WAIT's programmes occurred in the context of a WAPSEC inquiry in 1985. This was in response to a CTEC inquiry on arts education and training in Australia, headed by Dr Peter Botsman, and a workshop organised by WAPSEC later in 1985.²³ At first the WAIT School of Art and Design supported the review, which it felt might highlight some of the funding neglect that staff believed had occurred within WAIT. In their view too, WAPSEC had never allowed the school to grow, with the result that students had been continually turned away. TAFE programmes in the meantime had boomed.

WAIT's submission offered various models for the future development of the visual arts in Western Australia which all assumed WAIT retaining its position as the sole provider of degree courses in the field. However, one extreme option suggested that WAIT should phase out one of its major fields, to ensure excellence in the remaining two. This was not a favoured alternative and was qualified by many preconditions, yet it reflected the low level of staff morale at the time.

The WAIT school was profoundly shocked, therefore, when the WAPSEC committee effectively recommended developments that accepted the self-denying option.²⁴ The committee also advocated boosting WAIT's design programme; the establishment of a college of art at the Mount Lawley campus of the WACAE along the lines of the Academy of Performing Arts; and the building of a major TAFE college of art within the Perth cultural precinct. In its report the committee assumed that WAIT priorities favoured development in the sciences and technology, within the context of State policy to restrict WAIT to an extremely low rate of growth for the foreseeable future.

The WAIT response greeted these conclusions with derision and disbelief. It savaged the committee's reasoning, blamed WAPSEC funding neglect for the school's inability to meet the high student demand, and complained about the committee's 'cavalier' treatment of WAIT's long-standing and celebrated contributions to art and art education in Western Australia. Effectively, the response continued, WAPSEC planned to dismember the WAIT programme without recognition of its established reputation, or any appreciation of WAIT's traditionally broad definition of 'technology' as comprehending applied fields in the humanities and the social sciences.²⁵

As it happened, the major recommendation in the WAPSEC report, that a central college of art should be established at Mount Lawley, did not materialise. Not only was there no money for it, but the emotive appeals from WAIT also had an effect. A TAFE School of Art and Design, alongside the Perth Technical College, did eventually come into existence some years later. Meanwhile WAPSEC's visual arts review had two interrelated impacts: one was to exacerbate tensions between WAIT and WAPSEC, now seen as totally unsupportive of WAIT; the other was to bring WAIT out strongly in defence of the arts. Every member of the WAIT Council signed the official WAIT response to WAPSEC; and in the WAIT submission for the 1985/87 triennium, a more balanced approach to WAIT's future development reinstated the arts and social sciences among the institute's total growth and funding priorities.

TAFE Interfaces

In contrast to conflict on many other issues, WAIT took pains to co-operate fully with the Commonwealth Ministry of Education on credit transfer and articulation with the TAFE system. This actually dated well back into the 1970s, when the elevation of TAFE to form part of CTEC expressed in organisational terms the national priorities in training and employment for youth. During 1981 CTEC had made a formal distinction between higher

education—referring to university and advanced education—and tertiary education, which encompassed the whole of post-secondary education. Under the Labor Government, TAFE's interface with both secondary and higher education formed an important element in the 'participation and equity' programme. Policy revisions in 1984 emphasised access and advanced standing provisions to favour graduates from TAFE seeking entry to higher education.²⁶

The opening by Premier Charles Court in 1981 of a Federated School of Mines at Collie in the centre of Western Australia's coal-fields, capped several years of co-operative work (before Watts was director) between WAIT, the State's Technical Education Division and the two companies mainly concerned: Western Collieries and Griffin Coal.²⁷ Funding was from the companies (\$400,000); WAPSEC (\$25,000); the State Energy Commission (\$50,000); KOMATSU, a Japanese manufacturer of huge mining equipment (\$20,000); and the Education Department (\$366,000 for a new TAFE building). At the school, students could study locally parts of WAIT courses in engineering and geology, and various programmes offered from within the TAFE system, as well as gain assistance with external materials from WAIT and the Technical Extension Service. The school, which formed part of a complex adjoining the Collie Shire Library, the Collie High School and Western Collieries laboratories, was operated under a council chaired jointly by Thomas Ivankovich (Western Collieries) and R. Moffitt (Griffin Coal), who had been prime movers in the project from the outset.

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WAIT's submission offered various models for the future development of the visual arts in Western Australia which all assumed WAIT retaining its position as the sole provider of degree courses in the field. However, one extreme option suggested that WAIT should phase out one of its major fields, to ensure excellence in the remaining two. This was not a favoured alternative and was qualified by many preconditions, yet it reflected the low level of staff morale at the time.

The WAIT school was profoundly shocked, therefore, when the WAPSEC committee effectively recommended developments that accepted the self-denying option.²⁴ The committee also advocated boosting WAIT's design programme; the establishment of a college of art at the Mount Lawley campus of the WACAE along the lines of the Academy of Performing Arts; and the building of a major TAFE college of art within the Perth cultural precinct. In its report the committee assumed that WAIT priorities favoured development in the sciences and technology, within the context of State policy to restrict WAIT to an extremely low rate of growth for the foreseeable future.

The WAIT response greeted these conclusions with derision and disbelief. It savaged the committee's reasoning, blamed WAPSEC funding neglect for the school's inability to meet the high student demand, and complained about the committee's 'cavalier' treatment of WAIT's long-standing and celebrated contributions to art and art education in Western Australia. Effectively, the response continued, WAPSEC planned to dismember the WAIT programme without recognition of its established reputation, or any appreciation of WAIT's traditionally broad definition of 'technology' as comprehending applied fields in the humanities and the social sciences.²⁵

As it happened, the major recommendation in the WAPSEC report, that a central college of art should be established at Mount Lawley, did not materialise. Not only was there no money for it, but the emotive appeals from WAIT also had an effect. A TAFE School of Art and Design, alongside the Perth Technical College, did eventually come into existence some years later. Meanwhile WAPSEC's visual arts review had two interrelated impacts: one was to exacerbate tensions between WAIT and WAPSEC, now seen as totally unresponsive of WAIT; the other was to bring WAIT out strongly in defence of the arts. Every member of the WAIT Council signed the official WAIT response to WAPSEC; and in the WAIT submission for the 1985/87 triennium, a more balanced approach to WAIT's future development reinstated the arts and social sciences among the institute's total growth and funding priorities.

TAFE Interfaces

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Tertiary Awards; and revisions of TAFE courses to introduce the national award of the associate diploma.

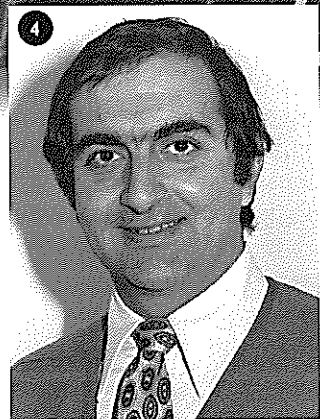
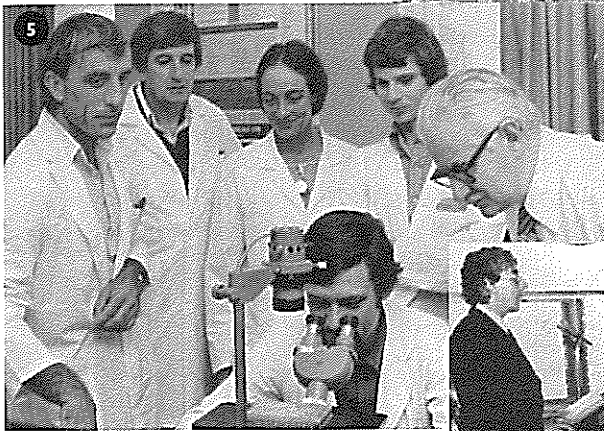
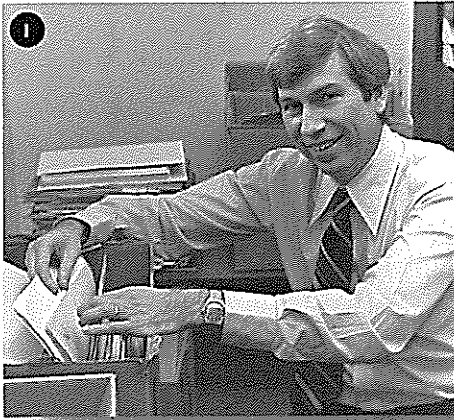
Commonwealth policies to improve opportunities in regional centres through contracting between higher education and regional institutions, received lively support at WAIT. In that connection there were already many precedents, for example co-operation with the State government over reorganisation of the School of Mines, the joint TAFE-WAIT venture at Collie, and extensive co-operation in the external studies field throughout the Pilbara and Great Southern regions. Watts was especially supportive of country contractual arrangements, which he considered preferable to the establishment of branches of major metropolitan institutions. His particular priority was to prevent repetition of a decision by Labor Minister for Education Pearce to establish at Bunbury a branch of the WACAE. WAIT had been asked to be the initial partner but refused, having already been adversely affected by experiences at Kalgoorlie.³¹

Contractual agreements with community and regional TAFE colleges subsequently involved first-year business and nursing courses being made available in the Pilbara, Kalgoorlie, Geraldton and Albany. At Kalgoorlie WAIT's TAFE teacher education programme was also made available on a contractual basis in the Kalgoorlie College. These colleges continued to prove a focal point for support to WAIT external students residing nearby, a factor rendered perhaps more important as financial pressures obliged WAIT to curb the expense of external teaching. In 1983, for example, the Bunbury Advanced Education Centre, which dated from 1973, was closed and academic staff in the Department of External Studies were redeployed on the Bentley campus. Even so, external studies remained a significant part of teaching in the fields of business and management, education and the social sciences. There were more than 2,000 external students enrolled with WAIT in 1984.

As for credit transfer between the higher educational institutions, WAIT co-operated actively with Commonwealth initiatives in spite of its over-enrolment predicament. During 1986 one per cent of the new enrolment quota (thirty equivalent full-time places) was set aside to accommodate exchange enrolments. Watts did not miss the opportunity, in view of the financial and enrolment situation at the time, of driving home to the CTEC chairperson in Canberra, Hugh Hudson, the significance of what WAIT had done.³²

Off-Shore Academic Programmes

Dr J. G. (Jack) Williams in 1978 had speculated about an overseas venture, with educational administration serving as a model, in the case where normal student numbers at WAIT were falling and funds either static or declining. During 1981 the Division of Business and Administration saw overseas ventures in the context of securing the future and bolstering staff morale.³³ Staff were resentful of Watts' orientation to the sciences and technologies, and were convinced that internal budget distributions took money from business to support them.



1 Dr Barry Fraser, appointed head of curriculum studies in the Faculty of Education, 1982, and later director of the Science and Mathematics Education Centre.

2 The Collie Federated School of Mines, opened in 1981, was a co-operative venture involving the mining industry, WAIT, the School of Mines and TAFE.

3 Albert Evans, co-ordinator of mining studies at the Collie Federated School of Mines, addressed a packed hall at the opening.

4 Dr Stan Kailis attracted large research grants to the School of Pharmacy in the 1980s for drug usage research.

5 Senior Lecturer in Medical Technology Dr John Wetherall (*second from left*), recipient of big grants for biotechnology research, with medical technology staff (*left to right*) Lecturer Ian Lee, research assistants Gail Simms and Lawrence Greed, head of medical technology J. M. Foley, and at the microscope, Technical Officer David Lyons.

In the circumstances, the division held a seminar in 1981, led by Selwyn Enzer, a visiting scholar from the University of Southern California, to identify options for future growth and the improvement of staff morale. One alternative, described in Chapter 10, was the establishment of a Centre for Business Research and Development. The other was to venture into the Southeast Asian student market. There were good reasons for considering this second possibility, not the least being WAIT's tradition of enrolling 2-3 per cent of its students from the region, and Western Australia's close connections with the region in trade, tourism and the provision of secondary school places for Asian children.

The first tentative approaches in 1982 involved Fred Frost exploring opportunities for the introduction of marketing courses with the Singapore Institute of Management.³⁴ These discussions proved unsatisfactory, however, and there was some resistance to the idea from within the division itself. During December 1982 a graduation ceremony in Singapore for educational administration students provided the occasion for new initiatives, this time with the Singapore Marketing Institute and the National Productivity Board of Singapore. WAIT Director Watts attended the ceremony, held at the Raffles Hotel, where he became acquainted with the division's plans. Watts quickly became an enthusiastic supporter while the division also revised its own approach to off-shore ventures in the region.

Opportunities in Singapore and Malaysia at the time had been created by the withdrawal of British government support for external courses in overseas countries. Responding quickly, North American universities had stepped into the vacuum. WAIT, for its part, through its educational administration ventures had a decided edge over most Australian institutions and so returned to the discussion table with the Singapore Marketing Institute and the National Productivity Board of Singapore. The intention was to mount a master of business degree course in Singapore.

At this point, however, quota restrictions at WAIT stood in the way of enrolling new students. Circumventing that obstacle might be possible nevertheless, were the Singapore bodies involved to act as intermediaries by 'purchasing' the WAIT courses on behalf of the students, who would thus be considered by Commonwealth authorities to fall outside the limits of the Australian student quota.³⁵

Finding the right level of course to attract Singapore students stood as an important challenge. American universities were concentrating on diploma courses offered in conjunction with the National Productivity Board, although the National University of Singapore also conducted an executive development programme with the co-operation of Stanford University's Graduate School of Business. Singapore's need for management development training, after a period of sustained economic growth, still outpaced available opportunities. WAIT's first experiment (in 1983) involved the master of business degree course with the graduate diploma programme as the first stage, offered in conjunction with the Singapore Marketing Institute and the National Productivity Board of Singapore.

A combination of two factors undermined chances of success with the masters course. One was the unreliability of the Productivity Board as a partner. The other, more serious, was that WAIT's own capacity at this level was under question following recommendations in the Ralph Report on management education in Australia. The solution occurred to WAIT's representatives—Dr Ken Hall, Dr John Sharpham and Ron Hancy—while attending a final graduation ceremony for the educational administration group. It was to introduce the bachelor of business degree course as a conversion programme for Singapore students holding management diplomas of Singaporean or overseas institutions and agencies. There were hundreds of such students for whom a degree would prove attractive.

Finding a suitable partner then took a new turn when James Loh of the Marketing Institute suggested he act as the WAIT representative in Singapore. An efficient and ethical chief executive of the institute and a personal friend of Hall, Loh provided the drive and credibility needed at the local level. (The division had previously attempted to work through a local WAIT graduate and alumni member whose efforts had not been successful.)

On funding, the Singapore Marketing Institute was to pay WAIT for the course, having raised the fees from intending students. This complied with Commonwealth restrictions under State grants legislation, since the students were not directly enrolled into the WAIT courses in competition with Australian students. Even so, there were fine points of legal interpretation involved that made the venture somewhat risky if it were opposed in Commonwealth circles. The WAIT Council therefore, while approving the course, sought endorsement from WAPSEC of the principle of offering accredited courses on a full-fee basis, until such time as the Australian government resolved its own policies with regard to fee-paying overseas students.

At the national level the new Labor Government was anxious to increase the enrolment of overseas students in Australian institutions. Their reasons were complex: an influx of overseas students would offset the decline of Australian student numbers; closer ties with Asia would promote diplomatic, cultural and trading relationships between Australia and the region; and, at a time when Australia's balance of payment difficulties were acute, there were significant economic returns in selling Australian higher education off-shore.

The Commonwealth's 'participation and equity' programme, which was aimed at increasing participation in Australian post-secondary education and serving the employment needs of a restructured economy, was a complicating factor. Asian students, driven by economic necessity, sought enrolment in the very high priority areas that were most attractive to Australian students. Every Asian student admitted, under conditions where tuition was free and all places controlled by government, meant the exclusion of an Australian student. To review the matter, the Hawke Labor Government appointed two committees—the Goldring committee and the Jackson committee—to consider overseas aid and student assistance policies.³⁶ The Jackson committee, in particular, examined the economic value of full fee-paying students to the Australian economy.

WAIT's submissions to the Commonwealth on fee-paying overseas students were underpinned by the potential to augment institute resources and provide enrolment growth denied by co-ordinating agencies. It was argued that such fee-paying students should be excluded from quotas applying to Australian students, thus avoiding interference with the domestic principle of free tuition, and competition for places between Asian and local applicants. WAIT submissions also canvassed the special advantages of initiating off-shore programmes in concert with the countries concerned (as with the Singapore scheme). Such ventures would facilitate student selection and English language training; create an infrastructure capable of being developed later by the host country; minimise political resentment in the host country about the loss of overseas currency spent by students attending Australian institutions; and provide forms of education that were cheaper for the students and conducted in a more normal cultural environment.

Throughout 1983 and 1984 Watts and Associate Director (Academic Affairs) John Sharpham relentlessly pursued a policy of deregulation where fee-paying overseas students were concerned.³⁷ Both received a positive reception in Canberra from the Prime Minister's Department, the Department of Finance and the Department of Trade. The WAIT initiatives also struck a sympathetic chord within the Burke Labor Government in Western Australia, which shared with its federal counterpart policies to promote education and training, technology development and overseas trade. During 1983 the State government established the Western Australian Development Corporation to promote (amongst other things) trade ventures in the region, including the marketing of higher and secondary education.

Minister for Education Senator Susan Ryan, however, forcefully opposed the whole idea on ideological grounds. In this respect, she locked horns with Watts, whose enthusiasm for fee-paying overseas students ran counter to her own proposals in 1983 to limit overseas student enrolment in the interests of expanding the Commonwealth 'participation and equity' programme.³⁸ The whole principle of charging fees in Australian higher education, in any event, profoundly divided the academic community.³⁹ Ryan herself was opposed to fees as undermining the free tuition policy in Australian institutions. When the Hawke Government eventually agreed to the fee-paying schemes, moreover, the Commonwealth took more than twelve months to establish its own guidelines and procedures to handle student applications and enrolment.

In the meantime, the WAIT bachelor of business degree course in Singapore commenced in 1985, well ahead of Commonwealth guidelines for enrolling overseas fee-paying students in Australian institutions. Funding for the WAIT off-shore scheme was never actually challenged, although acknowledged as an adventurous ploy at the time. The bachelor of business degree course was the pioneer programme in Australia, having 'broken' ranks before the race for overseas students began in earnest in 1986.

School of Mines

The Mineral Technology Unit was a longer term outcome of Watts' determination to see WAIT closely involved with research and development in mining—the State's largest industry. Crucial to that involvement were efforts to rebuild morale and leadership at Kalgoorlie, all but decimated in the wrangles of 1981–2. As mentioned in Chapter 9, Watts moved quickly in 1982 to recruit principal lecturers to head the school's departments of mining geology, mining engineering and extractive metallurgy. Two of these, Dr I. J. Corrans and E. C. McDonald, were finally appointed at (Campbell classification) head of school level.⁴⁰ The third post went to Dr C. H. James.

On the broader front, reinstatement of the School of Mines at Kalgoorlie as an integral part of WAIT reopened most of the old problems of split-campus operation and budgeting priorities. A new feature of the situation, however, was the need to head off a challenge to WAIT's dominance in applied geology and metallurgy from Murdoch University, about which WAIT complained bitterly during 1984 to WAPSEC.

During 1984 Watts confronted these difficulties in a statement of principles and operational proposals that accepted a number of assumptions: the School of Mines as an essential part of WAIT; the financial drain on the Bentley operations; the necessity of retaining two-campus operations; exclusion of Murdoch University from competition in metallurgy; and the need to build up post-graduate and research work at Kalgoorlie as a matter of establishing the school's credibility with the mining industry.⁴¹ Apart from contentious compromises between Bentley and Kalgoorlie (especially with respect to metallurgy and mining engineering), the key to Watts' proposals was the establishment of a Centre for Mining and Mineral Technology, an institute-wide organisation employing resources of the Bentley, Kalgoorlie and Collie campuses.

On the financial side, Sir Laurence Brodie-Hall quickly moved to find external support for student accommodation (to facilitate the compulsory transfer of students to Kalgoorlie for relevant course segments) and also for the development of School of Mines facilities. He guaranteed additional accommodation at Agricola College, funded from private industry (\$125,000), the State (\$125,000), and the Commonwealth (\$250,000). During 1985 WAIT took over administrative responsibility for Agricola College.⁴² Donations of \$400,000 to provide a School of Mines Education Fund were the outcome of Brodie-Hall's initiatives with mining companies.

Other critical factors in the recovery of the School of Mines from its nadir in 1981 were a five-year plan of development by Dr John Walsh; reaccreditation of the school's courses in 1984, which ensured continuation of four degree programmes; improved facilities for extractive metallurgy, mineral exploration and mining geology; and landscaping of the grounds to a plan by Jean Verschuer, who was Brodie-Hall's wife.

Brodie-Hall was heavily involved in decisions to establish a Mining Research and Consultancy Centre at Kalgoorlie. Intended as the focus for consultancy and research services, the centre was approved in 1986—with the name 'Brodie-Hall Mining Research and Consultancy Centre'—and finished in 1989. Brodie-Hall donated \$100,000 of his own money towards the building. During 1986 the school officially recognised the long and distinguished contributions of Brodie-Hall by holding a special celebration to record his fifty years of association with its affairs.

Over-Enrolment Crisis 1983–1984

While all the cases described above involved some level of frustration with co-ordinating bodies, a genuine confrontation emerged during 1983 over the question of enrolments and recurrent funding. On enrolments, WAIT exceeded the numbers of new students approved by CTEC and WAPSEC in 1982 by about 200, and in 1983 by more than 400. The funding consequences were potentially serious, since WAIT would have to finance the excess from within its own resources, while the pipeline effect as students moved through their courses was unavoidable. The phenomenon was not restricted to WAIT since both the WACAE and UWA over-enrolled in 1983, although to a lesser extent.

WAIT investigations identified three factors influencing the situation: the heavier-than-forecast re-enrolment of students as a reaction to the possible reintroduction of tuition fees by the Commonwealth; higher than anticipated applications and acceptances of new students, also related to speculation about fees; and rising youth unemployment, which encouraged more students than expected to seek enrolment in the vocationally oriented courses at WAIT.⁴³ The effect was to upset historical patterns on which enrolment forecasting and formulae to control admissions had been based. WAIT, in these circumstances, found it difficult to control its student offers with the precision of former years.

There was another issue, however. Watts as director was genuinely concerned about the number of students being turned away from higher education for lack of sufficient places that were funded. He also strongly believed that WAIT's vocational programmes, especially in the sciences and technologies, were vital to the health of the Australian economy and the future employment prospects of students who were seeking enrolment in large numbers. The courses were inherently more attractive to students than most available at either the WACAE or Murdoch University.

In this respect, Bardsley's study of students unable to gain admission to WAIT indicated that these students did not enrol in large numbers at Murdoch University or the WACAE—they simply stayed out of higher education altogether.⁴⁴ The WAIT argument was that in a time when the State government and Commonwealth government wanted to increase participation in tertiary education, it made little sense to turn students away from WAIT. Yet the same governments were determined to hold growth at WAIT (and UWA) to facilitate growth at Murdoch University and the WACAE.

WA institute sets up pioneer offshore degree for Asians

By **ANDREW McILWRAITH** and **HELEN TRINCA**

ONE of the most entrepreneurial campuses in the country, the West Australian Institute of Technology (WAIT), has set up Australia's first "offshore" degree course to cater for the lucrative Asian market.

But WAIT's export zeal almost ran foul of the law: it has had to adopt a complicated funding system to avoid breaking federal legislation preventing the charging of tertiary fees.

WAIT is confident its arrangement is safe.

ses in overseas countries, paid for by the students or their governments.

This approach has gained support in recent months as an alternative approach to training of some students - taking the students, rather than bringing the students.

The concept also has support in principle from the Commonwealth Tertiary Education Commission. But because the Government has not yet announced a policy, CTEC advised that it was "preliminary".

benefited from its long-standing association with Singapore.

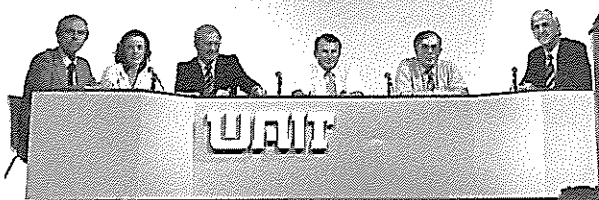
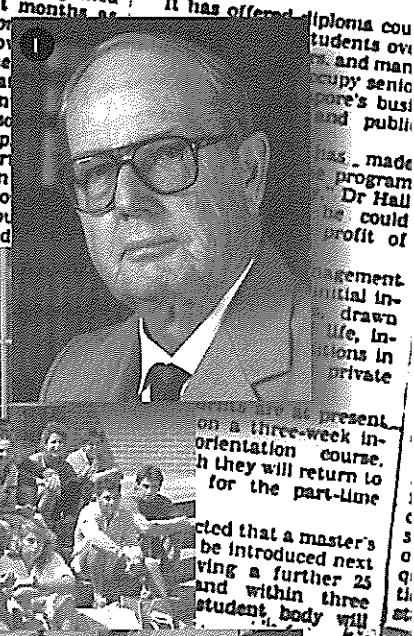
It has offered diploma courses to students overseas and many occupy senior positions in the public sector.

has made a program of Dr Hall's could be a profit of

management. Initial in- drawn life, in- sions in private

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ected that a master's be introduced next wing a further 25 and within three student body will



1 Justice Peter Brinsden became chairperson of the WAIT Council in June 1985.

2 'A Degree of Experience', the first of a series of educational programmes produced by the Educational Media Centre in 1984 for Bunbury's commercial network GWN Television, featured WAIT academics (left to right) Denny McGeorge (architecture and planning); Melissa Vernon (nursing); Adrian Ball (electronic engineering); Norm Uren (geology and geophysics); W. S. (Bill) Cooper (social sciences); and John Hughes (counselling).

3 Participants in WAIT's Aboriginal bridging course in 1986 celebrated its 10th anniversary with a record intake of forty students.

Background: Excerpt from *The Australian* Higher Education Supplement 250, 23 January 1985. ©The Australian

Government services business law to Singapore students - P

Watts adopted the view that WAIT should not reject the new students. It was anticipated that governments would introduce corrective mechanisms to fund the students at a later date. WAIT was shocked, therefore, when WAPSEC recommended only modest enrolment growth for Western Australian institutions in the 1985/87 triennium, and in fact only a student increase of 100 for WAIT over the three years.⁴⁵ Not only was this figure derisory, it ignored the realities of student demand and preferences. 420070

Watts, with the full support of the WAIT Council, responded by taking WAIT's case directly to the State and Commonwealth ministers for education, seeking redress in the funding situation as well as a revision of WAPSEC forecasts.⁴⁶ The first round of correspondence, starting in late 1982, climaxed in February and March 1983 with detailed complaints about WAIT's disadvantages to Education Minister Clarko, in Perth, and Senator Peter Baume, in Canberra. Following the election of Labor governments in both Perth and Canberra, Watts spoke directly with and wrote to the new premier of Western Australia, Brian Burke, and also wrote to Senator Ryan, expounding WAIT's problems and stressing the economic importance of higher education in the context of Labor policies on higher education and science and technology.

Earlier, in February, when the chairperson of the Advanced Education Council, Gregor Ramsey, visited Perth, WAIT presented a detailed refutation of the WAPSEC recommendations on its likely growth over the next triennium.⁴⁷ The submission went a good deal further than to contest policy to hold back growth artificially at WAIT in support of Murdoch University and the WACAE. It also explained the frustration at WAIT in being unable to convince co-ordinating authorities to support new initiatives—for example, a scheme to enrol Royal Australian Air Force engineers in WAIT courses; chemical engineering; dental therapy; nurse education; and TAFE teacher education—all of which were direct responses to urgent local needs.

In disputing WAPSEC recommendations, the WAIT submission vigorously urged the development of new courses in areas closely associated with national and State economic activity (for example, mining) and also stressed that the high rates of population growth in Western Australia ran counter to national trends. Further, lumping institutions like WAIT alongside former teachers' colleges denied the realities of high-cost instruction in the sciences and technologies. Watts emphasised too, that WAIT was shifting its priorities, in conformity with national and State policy, towards science and technology. Community demand and industry needs, moreover, underpinned a growing concentration at WAIT on post-graduate teaching and research, for which WAIT and the DOCIT-type institutions were inadequately supported, compared with universities. The Australian economy, the submission contended, languished for lack of investment in research and development—the very areas in which WAIT could provide significant support. The WAIT submission ultimately challenged WAPSEC 'reluctance' to promote institutional demands for financing of programmes in the high-cost fields concerned.

WAIT statements attributed much of the problem to the 'creaking structure' of co-ordinating authority operations at State and federal levels. It was contended that these placed rigid limits on institutional initiatives, created divisiveness in the higher education system, and failed to serve the needs of the Australian economy. Watts himself blamed current problems on the assumption by the Commonwealth in 1973 of financial responsibility for higher education. Statutory power meanwhile remained with the States, exercised through co-ordinating authorities lacking the knowledge and drive to make wise decisions. Watts, in this connection, kept his personal feud with Pullman out of the public arena, but it surfaced in flaming attacks in private and in meetings with the new minister for education. Relationships between WAIT and WAPSEC, and particularly with Pullman at this stage, hit an all-time low.

Watts initially made little headway through direct approaches to politicians and Commonwealth bureaucrats. In Canberra he was regarded as naive compared with his predecessor, Dr Haydn Stanley Williams. At the State level Liberal Education Minister Clarko advised the premier to put Watts back in his place, to make him work through WAPSEC. The new minister, Pearce, at first in agreement with the binary philosophy and the WAPSEC co-ordinating function, concurred with his predecessor's assessment that Watts was indulging in special pleading and trying to circumvent government policies. Neither minister expressed any sympathy for WAIT concerning the over-enrolment of students, which they pictured as a calculated gamble.

At Commonwealth level Senator Ryan rebuffed Watts' attempts at direct communication. Relations were further soured as a consequence of the minister's action in forcing WAIT to reduce the director's salary by openly deducting \$4,000 from the institute funds in 1984.⁴⁸ WAIT's council reacted bitterly to the minister's directives, which were insulting in tone and considered to be a piddling interference in the institute's autonomy. During 1979 WAIT, with ministerial approval, had set the director's salary marginally below that of the vice-chancellor of UWA, to reflect WAIT's size and standing in Western Australia. Senator Ryan would not listen, however, and Watts made little headway either with direct approaches to those who respectively chaired the Advanced Education Council at the time, H. S. Houston, and his successor, Gregor Ramsey, or with Karmel's successor as chairperson of CTEC, Hugh Hudson.⁴⁹

By 1985, Watts increasingly indulged in public commentary on shortcomings of the binary philosophy. He attacked interference by co-ordinating bodies, and Commonwealth (Ryan's) obsessions with participation and equity policies without due attention to the economic significance of applied science and technology, or to the costs borne by institutions forced to implement government social policies without adequate budgetary supplementation.

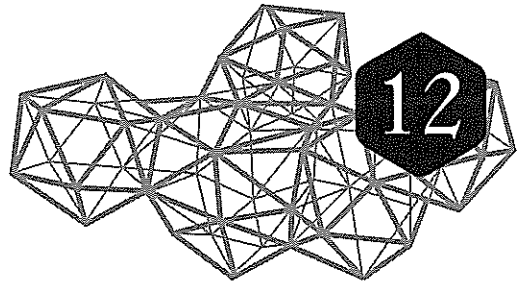
Commonwealth action in November 1983 to increase higher education enrolments with grants at the 'marginal' rather than full funding rates was a case in point. Watts held that the decision reflected the Commonwealth Department of Finance belief that the institutions were overfunded; indeed

WAIT's performance in carrying over-enrolment without supplementation justified this belief.⁵⁰ Pullman at WAPSEC believed that WAIT's over-enrolment was indeed a factor influencing the 'marginal' funding decisions. Senator Ryan exacerbated the situation in 1984 by ruling that money to support marginally funded students at WAIT should be redirected to the WACAE. This vindictive action at last moved WAPSEC into vigorous defence of WAIT, including a case for enrolment intakes in 1985 at least equal to the then current levels.⁵¹

Support for WAIT policies was much more positive outside the Commonwealth Ministry of Education, in such areas as health; science and technology; trade and employment; and finance. At the State level too, WAIT received active political support in the ministries for health; minerals and energy; and technology and employment; where the research and development activities were attracting substantial government grants and encouragement. This potentially was more influential than reliance on such bodies as WAPSEC and CTEC, which increasingly became isolated from the main thrust of government policies.⁵²

Watts at this time also played a leading role in dissolving DOCIT, whose existence he considered diluted the combined voice of the CAEs. The Australian Conference of Directors and Principals (ACDP) afterwards became the single organisation representing the interests of the advanced education sector.

In the meantime, however, WAIT was obliged to finance its enrolment excess from accumulated reserves and by enrolling new students at the lower end of approved quota levels.⁵³ Internal policies to contain expenses included tougher policies on student progress and re-enrolment; an institute activities review to identify economies; and strict limits to staffing, maintenance and grounds expenditure. At the same time, WAIT actively co-operated with government policies on inter-institutional rationalisation, credit transfer between institutions and course contracts with regional institutions. The enrolment of fee-paying overseas students also was pursued as a possible source of additional students and revenue.



Establishment of Curtin University of Technology

The Pearce Proposals 1984

Until 1984 WAIT, and Dr Don Watts in particular, made little headway in arguing the case for better funding of research in CAEs, or for a more flexible approach to enrolment growth. Challenges to WAPSEC and CTEC priorities also largely went unheeded. This situation began to change under the stimulus of research and development successes, government involvement in the Technology Park, the ventures with overseas students, and the overwhelming weight of Watts' own indefatigable efforts as public speaker and lobbyist with relevant authorities.

Labor Minister for Education Robert (Bob) Pearce meanwhile began to re-assess his position concerning WAIT. This coincided with his implementation of the recommendations of the Beazley and McGaw committees inquiring into education in Western Australia. These inquiries preceded a turbulent period of change in the State's schools, secondary examination systems and the organisation of the Education Department itself.

WAIT's role with respect to Pearce's controversial reforms to secondary education and public examinations was perhaps crucial. Watts made available the services of Planning Officer Stephen Hunter as executive officer to the Beazley committee, and Watts was personally involved in the work of the McGaw committee. The latter recommended major changes to the admission arrangements in higher education, and also the establishment of a Secondary Education Authority chaired by the director-general of education. When the universities vigorously opposed these changes, they were confronted by the minister, who forced them to comply with the new policies.¹ Official WAIT policy, welcomed by Pearce, was to support the changes without qualification.²

WAIT still managed to earn the minister's wrath, however, following newspaper publicity about alleged mishandling of its investments. When asked

by Pearce for an explanation, WAIT Council Chairperson Justice Alan Barblett had initially provided a rather peremptory response, justified in terms of institute autonomy as far as WAIT's financial affairs were concerned.³ Reason prevailed, however, with WAIT promptly delivering the explanations requested. These demonstrated not only that there had been no mismanagement but also that the alleged losses were covered by insurance.

Pearce's experience with the universities nevertheless led to the appointment by him of Labor member of the Legislative Council Robert Hetherington to chair an inquiry into councils and senates of higher education institutions.⁴ This was widely understood to be aimed directly at UWA, which Pearce believed to be governed by a conservative and élitist Senate that was too much influenced by academic and convocation (alumni) opinion. He was also highly critical of the time taken by such bodies to reach decisions—for example, on the new secondary school assessment policy—a phenomenon he contrasted with WAIT's ability to deal efficiently and quickly with new and major policy initiatives.

Pearce excited further controversy by replacing many Coalition appointees on councils and senates with Labor nominees, considered to represent more egalitarian constituencies. Many saw the move as a direct interference in institutional autonomy, and the reshuffle achieved considerable notoriety in the national press. The government appointed Bill Latter, an advocate for the State Schools Teachers' Union and long-standing union organiser, to the Senate of UWA; and added John Negus, the president of the State Schools Teachers' Union, to the WAIT Council.⁵

Watts took issue not so much with this particular appointment as with the government's aversion to appointing key private sector people on institutional councils. Public sector members, he asserted, tended not only to lack entrepreneurial and business acumen but also to perpetuate the public sector culture in which the institutions were already heavily steeped.⁶

Pearce, during this period, became sympathetic to WAIT's financial difficulties. Dr Ken Hall, acting for Watts who was then away on leave, had explained that WAIT's investment policies needed to be adventurous, since it lacked the 20-30 per cent loading-in funds for research that were enjoyed by the universities. Returns from investment on the short-term money market were higher than from the more conventional trustee investments. Pearce developed the view, according to Hall, that bestowal of university status on WAIT might resolve some of the institute's financial difficulties.⁷

During August and September, moreover, a public controversy erupted concerning WAIT's disadvantages under the 'marginal' funding arrangements for the 1985/87 triennium just announced by Senator Susan Ryan. The WAIT Council vented its frustration in public announcements (3 September) that *The West Australian* featured under the banner headlines: 'Why Funding Catastrophe faces WAIT!'

At this point Pearce entered the public arena to announce ideas about the future status of WAIT. He reports having mentioned the idea of university

status for WAIT during a conversation with a colleague in July 1984.⁸ His own conception was of an institution falling somewhere between a university and a college. It would be funded, as were universities, for research in appropriate areas but not in other fields. The use of State legislation to change WAIT's status appeared to offer possibilities, although his mind was far from settled on the idea. For advice he turned to both the WAIT Council and WAPSEC. Considering the matter far from urgent, he asked WAPSEC for a report in two or three months' time, preferring the Commonwealth not to be involved till the matter had been debated at greater length.⁹

The controversy over WAIT funding in September led Pearce to spell out his ideas in more detail. He envisaged WAIT becoming a 'university of technology' by way of State legislation, with the Commonwealth eventually accepting the need to fund the major technological institutes at a higher level.¹⁰ In this respect, the ACDP had won some recognition from the Commonwealth, which had just announced funding for key centres of teaching and research amounting to \$1 million, to be supplemented from private sources and directed towards work with 'potential for direct economic or social benefit'. Pearce believed that for WAIT, university status would not only enhance the work already established, but ultimately enable it to deal direct with Canberra rather than through WAPSEC.

WAIT's reaction, articulated by Dr John de Laeter as acting director, was to retain the institute's existing name and philosophy, but to seek the 'freedoms normally associated with a university'. Both he and Watts conceded that Canberra would be unwilling to treat WAIT as a special case, since the Pearce initiative would inevitably spark similar moves in the other States.

Newspaper reactions depicted Pearce as being incredibly 'cheeky' and likely to run into a brick wall in Canberra.¹¹ In the national capital the move was regarded with some disbelief, since the only previous elevation of an institution to university status (Deakin University) had been formally approved only after extended submissions from the State of Victoria. Nobody doubted that Senator Ryan would completely oppose such a unilateral declaration from Western Australia. As for Pearce himself, he reiterated that the idea needed more development and to that end had asked WAPSEC to prepare a 'white paper' on higher education that might be available by February or March 1985. *The Australian* newspaper was perhaps closer to the mark with its headline 'Stand by for the flow-on of WAIT's move for uni status'.

WAIT's official response to Pearce's announcement was concluded in November, after informal discussion between the minister; the council chairperson, Barblett; and council members, Dolin, Ewers and Reynolds (in September). At this meeting Pearce had indicated that WAIT's desire to introduce doctorates and appoint professors would be superfluous once it became a university, and he had also endorsed WAIT's overseas student enrolment initiatives and its joint venture with the Parry Corporation to establish a Marine Science and Technology Foundation. As for the formal response drafted by Hunter, it naturally welcomed Pearce's announcement but

emphasised an intention to retain WAIT's applied research and teaching focus. The statement nevertheless challenged the binary policy in higher education that denied applied research from participating in the 20–30 per cent loading in funds for research enjoyed by the universities. The submission also emphasised the need to introduce doctoral degrees in the major colleges (like WAIT) '...so that teaching, especially in fields of study unique to those colleges, can be taken to the highest level'.¹² The WAIT paper spelt out in great detail the adverse impact on its finances of lower levels of funding for colleges under the binary system.

Thereafter, in quick succession, WAPSEC took up the minister's request to report on WAIT's future status and the future shape of higher education in Western Australia; a further request, in October, to study ways to 'beef up' WAPSEC powers under its Act; and then to prepare a full-blown 'green paper' on post-secondary education.

During October Pearce outlined in State Parliament what he had asked WAPSEC to do and indicated that after the Green Paper had been fully debated, ~~he would then approach the Commonwealth government.~~¹³ There were clear indications, however, about the sort of report he desired. On WAIT, he intended to grant it university status. On institutional governance, his appointment of the Hetherington committee challenged the existing structure of councils, while his own ministerial appointments to councils were now a matter of record. He had also completely reconstructed the WACAE, which now enjoyed its own parliamentary charter. It was further clear that Pearce was determined to exert his will on institutional rationalisations, which WAPSEC had been unable to effect. On TAFE, the minister planned major reforms, including its separation from the Education Department.

Pearce as minister also wanted the Commonwealth to accommodate State priorities in Western Australia, as expressed through a stronger WAPSEC. He had been rebuffed on proposals to establish an Institute of Advanced Education at Bunbury, which the Commonwealth had refused to fund as a CAE. Although he wanted WAPSEC to have enhanced powers, he intended to make it a more effective instrument of government policy, able to implement decisions made by the minister.

WAPSEC's Green Paper, finalised in March 1985, failed to impress the minister, for it advised against altering the status of WAIT. Not only did WAPSEC recommend the binary system should be retained, it emphasised that Commonwealth policy was unlikely to change and that only modest growth could be anticipated at WAIT. The report included recommendations, however, that consultants should examine research at WAIT with a view to identifying areas of vital importance to the State and worthy of financial support. In time too, WAIT might be recognised as a doctorate-granting institution.¹⁴

WAIT's response, as might be expected, challenged most of the WAPSEC assumptions about potential student growth, the retention of balanced development in all institutions, and the rationale for maintaining the binary system.¹⁵ Also challenged were the conclusions regarding research, the award of

Pearce cutting a wide swathe through system



Mr Pearce has been in Perth and entered State Parliament in 1977. When Labor won power Mr Pearce was an obvious choice for the education portfolio and has moved swiftly to introduce a number of changes at all levels.

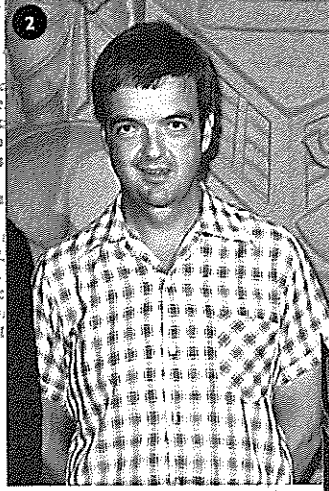
He returned to teach in Perth and entered State Parliament in 1977. When Labor won power Mr Pearce was an obvious choice for the education portfolio and has moved swiftly to introduce a number of changes at all levels.

More say in tertiary planning

THE West Australian Government wants more control over the development of universities and colleges in the State so that it can secure more State funded tertiary education for the Commonwealth. The plan to strengthen the role of the State comes from the Minister for Education Mr Pearce who recognises that increased government involvement is likely to upset their autonomy. In an interview with The Australian, Mr Pearce suggested that the Commonwealth State agreement could be his agreed education. The school Commonwealth will spell out how Commonwealth should be those goals. Mr Pearce said "mad States" have decided on Commonwealth tertiary education take account of particular needs of Western Aust



Dr Patricia Layzell-Ward



Dr Don Watts



HELEN TRING
28 NOV 84
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INDIAN OCEAN FESTIVAL

HIGHER

Why Watts is not waiting to wait

Dr Patricia Layzell-Ward was appointed head of the Department of Library and Information Studies in 1983. Social sciences academic Dr Kenneth McPherson co-ordinated the Indian Ocean Festival held in December 1984. Background: Excerpts from The Australian Higher Education Supplement articles on Education Minister Pearce's policy (19 September 1984) and WAIT Director Dr Don Watts (10 October 1984). ©The Australian

Dr Don Watts has to have a perspective of whether the tertiary system continues to exist in Australia and colleges in Australia to recognise they are in the same boat and only by creating a combined state-wide tertiary education system will they survive in his opinion. Dr Watts has been at WAIT since 1982, having gone there from a personal chair in Physical and Inorganic Chemistry at the University of Western Australia.

ogy to be educated into something they are cause there is no other survive financially." His argument the tertiary institutes have money so they can their particular should be funded between other advanced education: versatile, perhaps increase in recurrent. The other, re which Watts has institutions are to absorb extra without ext

Investment

Though he denies he has modelled himself on the presidential style adopted by American college chiefs, it is plain that above all he is an entrepreneur. He himself says he's a little like a car salesman, selling the tertiary sector. Much of his pitch is directed at industry and the professional organisations the two areas he believes must get behind tertiary education to lobby governments. The tertiary industry has to sell itself and convince the tertiary institutions in Australia are worth limited additional investment in tertiary education to look upon

1 Dr Patricia Layzell-Ward was appointed head of the Department of Library and Information Studies in 1983. 2 Social sciences academic Dr Kenneth McPherson co-ordinated the Indian Ocean Festival held in December 1984. Background: Excerpts from The Australian Higher Education Supplement articles on Education Minister Pearce's policy (19 September 1984) and WAIT Director Dr Don Watts (10 October 1984). ©The Australian Overlay: The Indian Ocean Festival 1984 postmark, designed by WAIT graphic design student Adrian Roderick, was used by the GPO for the duration of the festival.

doctorates and the favoured status of universities in the overall conception of higher education in Western Australia.

Minister Pearce himself disagreed with much in the WAPSEC paper. When confronted with this reaction, however, WAPSEC members declined to alter the report. They offered instead to prepare a draft government paper for release under Pearce's name. When finalised, this too failed to impress the minister. While the report was strictly confidential (although it was conveyed to the institutions concerned for reactions), the clash of wills between WAPSEC and the minister was common knowledge. Pearce later spelt out in State Parliament his frustrations about the WAPSEC draft paper, which he claimed neither dealt with the issues he wanted resolved nor argued for the policies he intended to implement.¹⁶ Indeed the minister had little further contact with WAPSEC until May 1986, when he again took up the matter of changing WAIT into a university.

During 1985 WAIT independently pursued many of the university status issues to the point of incurring Pearce's displeasure. He believed indeed that Watts was beginning to pre-empt his own initiatives. Dr John Sharpham, John Dolin, Dr Marc Liveris and Hall at one stage visited the minister to cool down the situation, offering advice that although Watts was abrasive and outspoken, much of what he was saying conformed closely with Labor Government policy.¹⁷

Pearce's announcements in August 1984 about university status for WAIT encouraged the Academic Board to consider proceeding independently on the introduction of doctoral degrees.¹⁸ A graduate studies working party gradually refined WAIT policy, to some extent in conjunction with RMIT, where doctoral degrees were about to be launched. When detailed proposals reached the education and general policy committee in September 1985, Watts asked for the proposed regulations to be approved and readied for transmission to the minister, Pearce, for his endorsement. Developments at RMIT, which aroused widespread controversy, were watched carefully.

The WAIT Council passed the regulations in September, and in November also approved arrangements between WAIT and Florida State University, which had been negotiated as a forerunner to WAIT's own doctoral programme. Under the latter scheme, candidates were to spend some time at Florida State and then return to WAIT for their dissertation work. The arrangement attracted considerable publicity in the national press, although it was overtaken by events in 1986.¹⁹

Independent action to appoint several professors during 1985 also caught national press attention as further evidence of WAIT's impatience with the binary system. As with the doctoral degree issue, however, the professorial appointments were absorbed during 1986 into a much larger debate on university status for WAIT.

In July 1985 the long-awaited Commonwealth guidelines for enrolment of fee-paying overseas students finally appeared, enabling WAIT to commence the recruitment of students for enrolment at Bentley and the branch campuses. Initially a low-key affair, this was managed through Taylor College in Kuala

Lumpur (Malaysia). Most of the students sought places in the bachelor of business degree course, with a total of 100 students anticipated for 1986.²⁰ WAIT's ability to move quickly on enrolling overseas students, building on the base already laid in the Singapore programme, placed it at the forefront of Australian institutions of the time.

The Burke Government simultaneously encouraged the establishment in Perth of private ventures to attract overseas students as part of its export drive through the Western Australian Development Corporation. The first of these involved a consortium of Australian and Asian financiers taking up ideas of Dr Bean San Goh (from UWA), who initially proposed the incorporation of an independent college into the structure of the WACAE. Later he opened discussions with WAIT with a view to preparing students for the institute's business degrees. The WAIT Council in November 1985 reached preliminary agreement on the scheme with the entrepreneur concerned, the Excel Education Pty Ltd, which traded as the International Institute of Business and Technology.²¹

An even more adventurous proposal came from the Tokyu Corporation of Japan, which owned tracts of land at Yanchep managed by Yanchep Sun City Pty Ltd. The concept was for Tokyu Corporation to build a private university at Yanchep, enrolling fee-paying overseas students, which would come under the wing of a university in Western Australia for academic oversight and degree award purposes. For Tokyu Corporation the benefit would come from sale of land at Yanchep, much enhanced in value from establishment of the new university, which would offset the capital outlay. Pearce as minister for education and planning responded enthusiastically to the idea, which promised to attract major investment in Western Australia, bring in large numbers of overseas students and generally benefit higher education in the State. Exim Corporation (part of the Western Australian Development Corporation) became responsible for marketing and co-ordinating the proposal.

Exim approached Murdoch University, seeking its involvement in the joint venture with Tokyu Corporation. Murdoch University, for its part, established a committee to examine the project against a background of mounting opposition from its own academic staff. WAIT's non-university status ruled it out of contention as far as the Tokyu Corporation was concerned.²²

The various initiatives pursued by Pearce, the State government and WAIT itself came to a climax towards the end of 1985, notably at a meeting of the Australian Education Council held at Broome (in Western Australia) on 12 and 13 October.²³ At the meeting Pearce sought Commonwealth endorsement for the Yanchep and Goh schemes and also canvassed with other States the idea of a three-tiered higher education system, with such institutions as WAIT receiving Commonwealth funding for research. He also used the forum to hammer the Commonwealth on the need for funding support to regional post-secondary education. Commonwealth Minister Senator Ryan, however, signalled her opposition to private universities and changes in the binary system. She singled out for especially adverse comment, use of the term 'professor' in CAEs.²⁴

Yet the Commonwealth minister herself faced growing revolt among the States. The Northern Territory, for example, pressed forward with plans for a university at Darwin against the wishes of Canberra. Hugh Hudson's report on the restructuring of CTEC meanwhile fuelled apprehension about the growing centralisation of control over tertiary education in Australia. Like Watts, the heads of major institutes in New South Wales and Victoria publicly attacked the binary system as it applied to their own and other institutions. Disillusionment with Labor education policy too, received detailed documentation in a study by Dr Don Smart (Murdoch University) and Professor Roger Short.²⁵ In the Commonwealth Ministry of Finance, moreover, Minister Senator Peter Walsh opened a debate, previously unthinkable in Labor circles, about the reintroduction of tuition fees in Australian higher education.

With respect to research, Hudson's proposal to establish a research advisory service within CTEC, with implications that CAEs might have access to a pool of research money, invited immediate and spirited attack from the universities. However, in 1985 CTEC released a supplementary report which not only advocated research funds for the institutes but also proposed the establishment of a standing committee to boost links between tertiary education and industry, as well as to co-ordinate specific projects. A suggested grant of \$250,000 for research at WAIT (out of \$2.5 million for Australia) received enthusiastic support from Western Australia's deputy premier, Malcolm J. Bryce, who toured local campuses urging closer research ties with industry, citing WAIT's work as something of a model.²⁶ Watts, for his part, expressed disappointment at the small sum proposed, but accepted that it might serve as a precedent for the future.²⁷

Throughout 1985 Watts' national profile as a commentator on higher education policy became firmly established. His membership of the Australian Science and Technology Council added to his exposure (some believed even over-exposure) and then in early 1986 he became the chairperson of the ACDP. In the meantime, Watts spoke out forcefully on the critical issues affecting WAIT: the disadvantages of the advanced education sector; the need for research funding; overseas student policy and many other issues. He made no bones about his total rejection of the binary system, its cumbersome co-ordination machinery, and national policies that failed to recognise the importance of applied research to Australian industry.

During 1986 Watts' rising eminence in Australian education earned him fellowships of the Australian College of Education and of the Australian Academy of Technological Sciences and Engineering. *The Australian* headlined his appointment as chairperson of the ACDP in terms of 'Whirlwind Watts set to Pounce', concluding that 'Education Chiefs [were] in for a tumultuous year'. On the WAIT status issue, *The Australian* reported:

Dr Watts already regards WAIT as a university, albeit a university of technology. He also believes the other larger colleges presently meet the international criteria associated with universities, '...but are deprived of delivering their potential by the demarcation of the binary system'.²⁸

Yanchep Private University Project

WAIT became involved in the Yanchep project only when it became evident by early 1986 that Murdoch University, faced with implacable staff opposition, would not proceed with the scheme. The State government, firmly committed to it, then asked WAIT to help with a feasibility study and, in particular, to advise how it might handle engineering and business courses in the projected university. Watts was not prepared to commit WAIT until Murdoch University formally withdrew from involvement. When this finally happened in February, WAIT commenced its own detailed appraisal.²⁹

Watts released the broad elements of a possible WAIT approach to the Yanchep campus proposal in April. This differed in significant ways from the Murdoch University concept, not least in contemplating Yanchep as an integral part of WAIT and not as a separate institution with WAIT acting as a servicing agent where courses, teaching and awards were concerned. It was intended that Yanchep and Bentley together would broaden the base of existing WAIT programmes, add new teaching and research ventures, and produce a balanced enrolment of both Australian and overseas students. Yanchep was not intended for overseas students alone.³⁰

For Watts the whole scheme posed an exciting challenge with potentially valuable benefits accruing to WAIT itself. Freedom to operate a private campus would enable WAIT to break out of the bureaucratic supervision of Australian higher education that Watts found increasingly distasteful. Access to independently earned income too, promised to take pressure off WAIT's current facilities and add new, state-of-the-art accommodation and equipment. On student numbers, Watts believed that a significant injection of new Australian students was not only possible (with Commonwealth approval), it would also help to meet the local demand for higher education places. What appealed especially to Watts was the opportunity to participate in a major educational experiment never before attempted on this scale in Australia, while at the same time enhancing WAIT's reputation and gaining access to the financial revenue from tuition fees.

It was important to involve staff and students in planning as a means of avoiding the polarisation of opinion experienced at Murdoch University. Watts therefore drew heavily upon them in preparing outline proposals to the Tokyu Corporation that would specify conditions under which WAIT might contemplate involvement in the Yanchep project. A Yanchep campus development committee and six working parties spread the task among a wide range of academic and administrative staff at all levels, ensuring a wide dispersion of knowledge about what was happening; enlisted the co-operation of the ASA and the Student Guild (both disposed to reject the scheme); and pooled ideas across a wide spectrum of disciplines. The final proposal, finished in June, went to the Tokyu Corporation, Exim Corporation and Yanchep Sun City Pty Ltd for their reactions.³¹

On the political side, the Labor Government registered its full support for the Yanchep campus project with the Commonwealth minister for education.

From the outset, however, Senator Ryan approached the whole idea with a great deal of scepticism. Watts, for his part, went out of his way to inform the State Opposition leadership about the drift of WAIT planning. The outcome was full State Opposition support for the Yanchep scheme which, in any event, conformed to its private enterprise philosophies. Sir Charles Court, now retired, used his powerful influence to assist Watts in his dealings with the Japanese principals in the venture.

When it came to the point of decision, the Tokyu Corporation greeted the WAIT proposals with a lukewarm response, although impressed by the documentation provided. Disagreements occurred too, between and within the companies involved, that eventually caused the plan to be shelved. It died a natural death during 1987.

It was not so much the fate of the scheme that was important, more the controversy it generated in Western Australia and other parts of the nation. In the local and national press this revolved around Smart, from Murdoch University, a vocal opponent of the Yanchep proposal. He played a prominent and public role in lampooning the whole project and even, at one stage, addressed WAIT's ASA on Murdoch University's reasons for rejecting involvement with Yanchep.

While the ASA was co-operative on the project planning, if ambivalent about the scheme itself, the Student Guild at WAIT and other student associations vigorously opposed it. They saw the Yanchep project not only as racially divisive—a ghetto that would be populated almost solely by overseas students—but also serving as the first step towards the reintroduction of tuition fees in Australian higher education. There were, in any event, major problems with the site at Yanchep, which was windswept and barren, and far removed from the major concentration of population in metropolitan Perth. Most sceptics believed the campus had no chance of succeeding.

University of Technology Legislation

Independently, although inevitably caught up in the associated controversies of the Yanchep proposals, Pearce in January 1986 raised informally with State Cabinet the possibility of Western Australia conferring university status on WAIT. He gained approval to proceed with the proposal to the point where it could be presented formally to State Cabinet for action. The initiative was very much his own, for neither Watts nor the senior WAIT personnel knew about the move till it was announced some months later. In the meantime, Pearce continued consultations with CTEC and the Commonwealth minister for education, though to little avail.³²

It may have been information provided by Sharpham that helped Pearce to reach a decision to act unilaterally on university status. This information showed that in New South Wales, sixty per cent of students in higher education attended universities, whereas in Western Australia the proportion was only forty per cent. In other words, New South Wales on a proportional basis

received substantially more money for higher education than Western Australia. This argument failed, however, to impress opinion in Canberra.

Pearce's public announcement of his intention to introduce legislation changing WAIT into a university of technology was made at a relatively low-key meeting of the Australian College of Education, held at the Willetton Senior High School on 6 May. Both Watts and WAIT's dean of education, Dr John Lake, who were in the audience, were taken by surprise, neither having had any forewarning.³³ Pearce, for his part, formally announced his decision in an official press release issued on 20 May.

The announcement produced a flurry of activity at WAIT, not least in connection with finding a suitable name for the new university. It had been pointed out earlier, when university status had been first mooted, that WAIT should seek a new and distinctive name that would identify the institution outside Western Australia. In other States and overseas, WAIT was perhaps not as well known as was assumed in Western Australia itself. On the lighter side, budding comedians had a field-day making up acronyms from proposed titles. One of the least offensive 'WAUT', from the name 'The Western Australian University of Technology', failed to attract support.

Choice of the title 'Curtin University of Technology' stemmed from suggestions by WAIT's public relations officer, Peter de Young, very soon after Pearce's announcement at the Willetton Senior High School.³⁴ De Young had asked an art and design student, a personal friend, to make up a logo and letterhead and had struck upon the name of John Curtin as most appropriate. Not only was Curtin one of Australia's more famous prime ministers and a person who stood above narrow party prejudices, he was also a celebrated Western Australian. De Young took the idea to Watts and the associate directors on the following Monday, where it received enthusiastic endorsement and was immediately passed on to the minister. For Labor politicians and especially the prime minister of Australia, Robert (Bob) Hawke, Curtin had been a revered leader. So the choice was quickly accepted in the State Cabinet; at the national level, acceptance of the name would almost certainly be a good deal easier to swallow than the implications of changing WAIT into a university of technology.

Pearce, in his public statements, spelt out exactly what he intended for WAIT: it was to be a university of technology that, in institutional terms, would occupy a tier in higher education between the established universities and such clearly identified CAEs as the WACAE. The new university would be funded for research and programmes that were of university standing, but funded as a CAE for activities that clearly belonged to that sector of higher education.

University status also was important in improving WAIT's attractiveness to fee-paying overseas students. On this, WAIT's pioneering work in Singapore and in recruiting overseas students had been hampered by the fact that Asian students wanted a university degree, and in fields which WAIT was particularly well situated to exploit. Honours degree awards, introduced at WAIT in engineering during February, were partly intended to satisfy Asian student

expectations, in addition to countering disadvantages thought to affect WAIT graduates competing for employment with graduates of conventional universities.³⁵

Pearce and others associated with the Yanchep project deny charges that the university status issue was directly associated with WAIT's involvement in that project, asserting that university status was a significant factor in raising WAIT's general profile with overseas students seeking enrolment in Western Australia. Overseas student recruitment was only one factor in a decision that had been originally framed in 1984, in circumstances little influenced at the time by the admission of fee-paying overseas students.

It was clear from the outset that acceptance of Pearce's ideas by the Commonwealth would present impressive obstacles, since other States would inevitably want to follow suit. Not only was the whole future of the binary philosophy under threat but also the co-ordinating and administrative apparatus supporting it. One reason for announcing the status change in May–June indeed was to prepare for lengthy discussions with the Commonwealth government about institutional budgets during the forthcoming 1987/89 triennium. Pearce nevertheless had no illusions about the almost complete rejection his proposals would meet from the Commonwealth minister, and the chairperson of CTEC, Hugh Hudson.

At the local level Murdoch University academic Smart, the Murdoch University ASA and the Federation of Australian University Staff Associations immediately launched the first broadsides of criticism. In letters to national and local newspapers Smart charged that WAIT was essentially being rewarded for doing what an autonomous (a real?) university had declined—to lend its name to a profit-motivated venture at Yanchep that, once initiated, would almost certainly need to be underwritten by the State's taxpayers.³⁶ It had nothing to do, in his view, with the State's need for a third university. This approach was vigorously contested by WAIT academics and the minister himself, who asserted that the university and Yanchep matters were essentially unrelated. In response Smart charged the academics with naivety, and the minister with something more sinister. He placed the university issue alongside Pearce's other initiatives—in schools, tertiary education governance, the role of WAPSEC and even the TAFE system—as simply another example of the political turmoil into which the minister had pitched the whole of Western Australian education. The Murdoch University ASA, with Smart, demanded a full inquiry, with reactions from the other institutions and WAPSEC, together with acceptance from Canberra before legislation was introduced.

The Murdoch University opposition began to assume the appearance of paranoia, with direct lobbying of State Opposition members to stop WAIT's change of status. Pearce, angered by this action, saw it as unethical behaviour motivated by naked self-interest.³⁷ More amusing was an internal Murdoch University document that charged Watts with 'bully-boy' tactics, citing his public statement that Australia's immediate future needs would be better met by creating universities of technology than by allowing growth in some of the

existing universities.³⁸ UWA adopted a more muted stance, although its academic staff association opposed the status change at WAIT.

No less vocal than Murdoch University was the reaction in the WACAE's council, chaired by Dr Paige Porter (another Murdoch University academic).³⁹ It lobbied State Opposition and Labor politicians, seeking withdrawal of Pearce's undertaking on the grounds that the WACAE courses, many of them indistinguishable from WAIT's, would lose status from not being awarded by a university. The Yanchep proposals, moreover, threatened the future viability of the WACAE campus at Joondalup (just south of Yanchep), which had already been approved by the Commonwealth. The WACAE Council sought a full inquiry into the implications of the minister's actions in the light of co-ordinated higher education development in the State. This approach was vigorously supported by the WACAE Student Guild which, in addition, attacked the Yanchep scheme as a threat to free higher education in Australia.⁴⁰

WAPSEC found itself isolated by the flow of events. Smart claimed it had been intimidated, certainly by-passed, and it is evident from parliamentary debates that WAPSEC members were incensed at having been ignored.⁴¹ WAPSEC nevertheless sought a meeting with the minister in July and offered advice about implementation of the status change for WAIT.

Three alternatives were suggested by WAPSEC: one involved persuading the Commonwealth to assign Curtin University to Schedule 1 of the CTEC Act (which listed Australia's universities for funding purposes); another was to persuade the Commonwealth to insert a new stratum in its CTEC schedule, recognising a third tier of higher educational institutions funded for research purposes, to distinguish such institutions as WAIT from universities and CAEs; a third alternative was to persuade the Commonwealth to fund specified research activities in selected CAEs.⁴²

Reviewing the different alternatives, WAPSEC advised that Canberra would be unmoved on the first. As for the second, the WAPSEC chairperson, Dr W. A. (Bill) Pullman, considered that the trend of research funding policy in Britain and the Netherlands might well serve as a model for Australia. This involved establishing base funding for teaching and then the allocation of research money on the basis of a peer review process. If this was adopted in Australia, the Schedule 1 arrangements would no longer be relevant. WAPSEC, however, suggested an approach predicated on a teaching budget as for CAEs, and the establishment of a research fund to which WAIT (Curtin University) would have competitive access. Advanced education doctorates under this scheme would need to be approved on the national register of academic awards in advanced education.

Responding to the WACAE concerns, WAPSEC also asked WAIT for documentation about the possible impact of Yanchep enrolments on future development of the WACAE's Joondalup campus. Watts ridiculed this request, however, and the minister informed WAPSEC that Yanchep was an issue neither for WAPSEC nor for CTEC, since it would be a private campus. Australian students involved would be enrolled with WAIT and its enrolment limits would be set by CTEC.⁴³

At the political level the Liberal State Opposition gave qualified approval to Pearce's initiative. Its education spokesperson, Norman Moore, indicated the Liberal Party would not oppose the Curtin University legislation, nor was it opposed in principle to the Yanchep campus venture. He was sceptical, however, about the likelihood of Commonwealth funding for the new university, even though the party endorsed WAIT's case for increased research support.⁴⁴ Both Watts and Sharpham expended considerable energy in explaining WAIT's financial situation to the Opposition parties. Regarding the name 'Curtin' the Liberals, while not enthusiastic, did not intend to oppose it.

National Party opposition to the status change was difficult to fathom, since the Board of Management of the School of Mines voiced its strong approval and the Muresk Institute of Agriculture stood to gain from university status. Watts and others in the WAIT leadership group were faced with difficult lobbying to gain at least a grudging acceptance of the proposed Curtin University legislation.

Outside Western Australia significant opposition came from the Australian Vice-Chancellors' Committee. Its spokesperson, Professor Don Stranks, emphasised that changing the name would not make a great deal of difference. However, were university-style funding to materialise, it would need to be planned in the context of a deteriorating situation in university funding generally. Watts aggressively attacked the Australian Vice-Chancellors' Committee's case on two grounds:

It makes more sense to create a university from a large, diverse and distinguished institute of technology with internationally acknowledged undergraduate and masters degree programmes, as well as a sound track record in research and development.

and:

The Australian university sector would greatly benefit from some of these aggressively relevant institutions and the Australian Vice-Chancellors' Committee would benefit from some new attitudes and a little less complacency.⁴⁵

Coming from the chairperson of the ACDP, these were indeed fighting words.

The Commonwealth minister, at first conciliatory on the matter, considered that funding formulae for Curtin University would need approval on the basis of a submission submitted from Western Australia to CTEC. Nothing, in any event, could happen before 1988.⁴⁶ CTEC's chairperson, Hugh Hudson, was more forthright. Using as a guide Commonwealth policy regarding moves in New South Wales to establish a new university in Sydney's western suburbs, he advised that the Commonwealth would simply ignore the designation 'university' when it came to funding. Senator Ryan later agreed with this assessment.

In Perth on 7 August Ryan spoke at WAIT to a gathering of more than 700 students, defending the Commonwealth's opposition to '...State Government moves to rename, reclassify or amalgamate higher education institutions', and also disparaging '...a preoccupation with name changes, sterile debates about the use of academic titles and territorial wars over the way in which higher degrees are accredited as being less than worthy of our attention'. With

reference to Yanchep, and to an approving audience, she concluded: '...insofar as they are profit-making proposals, we ask who provides the resources, who benefits from them and who gets the profits?'⁴⁷

The senator probably expected the response that this address drew from Watts, which trod well-worn ground by this stage. However, the meeting also attracted a detailed letter from Brian Smith, then director of RMIT, in which he refuted much of her argument. He was especially critical of the funding for research in institutes of technology.⁴⁸

Students gave Senator Ryan a fair hearing except on the levels of tertiary assistance and the Commonwealth's announced intention to introduce a 'tertiary administration charge' as from 1987. She escaped having to answer a number of pointed questions on this last matter. Not so fortunate was Commonwealth Minister for Finance Senator Peter Walsh, who later attended WAIT to address business students about the Federal government's budget. The Student Guild stacked his meeting with protesters, who attacked Walsh about his attitude towards tertiary fees. Such was the pandemonium that Walsh folded his notes and beat a hasty retreat.⁴⁹

Among the other major Australian institutes of technology, the reactions to WAIT's change of status were, as might be expected, uniformly favourable. In Melbourne, Smith from RMIT saw it as conforming to what was already well advanced in Victoria. In Sydney, Professor Gus Guthrie at NSWIT gained his minister's support for legislation along the lines planned in Western Australia.⁵⁰ In Adelaide the Council of the South Australian Institute of Technology asked the State premier to ensure that the institution should benefit from the freedoms wrought by any forthcoming deregulation of the binary system.⁵¹ Only the Queensland Institute of Technology remained quiet, but Watts anticipated that university status would become an issue at the forthcoming State elections in Queensland. All the lay members of the ACDP also made clear their delight at the breakthrough being engineered by Pearce and Watts in Western Australia.⁵²

Pearce, by this stage engaged in slanging matches with Murdoch University staff, on 5 July introduced an entirely new element into the debate. He floated the idea of establishing a State university of Western Australia comprising WAIT, Murdoch University and the WACAE, perhaps managed by WAIT, which he thought had the best record for administration of any institution in the State. Watts, moreover, might be the head. This was a shock for Watts, to whom Pearce broke the news in a phone call to London the day before it became public.⁵³

The State university proposal caused a public furore. Murdoch's vice-chancellor was 'affronted'. Smart voiced alarm at 'Pearce's education policies on the run' and the State Opposition made a meal of the idea.⁵⁴ Pearce responded, arguing that the concept was only speculative at this point, by asking WAPSEC to consider the matter further, along with the Curtin University proposal already referred to it. But another side to the proposal, in Pearce's own words, was to show Murdoch University a 'downside' to its vitriolic attacks. In a

luncheon address to Murdoch University academics he posed the following questions: Would they expect WAIT to be consulted on and perhaps influence any decision he might take to assist Murdoch University? And, if not, why were they insisting on having a say in his plans to assist WAIT? Pearce reports that the questions failed to attract a reply.⁵⁵ Murdoch University's public complaints were certainly quietened, although its staff association, in conjunction with the Federation of Australian University Staff Associations, circulated to State Opposition members and others a lengthy statement arguing against the Curtin University and State university concepts.

Pearce formally took the proposal to amend the WAIT Act to State Cabinet on 11 July. Justification was on three grounds: to attract sponsorship for technological research; to enable WAIT to fulfil its potential; and to assist in the recruitment of overseas students. While the minister in his submission conceded that there was as yet no Commonwealth commitment on funds or the name change, even rejection should not automatically be regarded as failure. In his view, the legislation would eventually spell the demise of the binary system.⁵⁶

State Cabinet approval, when referred to the parliamentary caucus of the Labor Party for endorsement, encountered opposition for which Pearce had not bargained.⁵⁷ The measure was not only rejected in caucus, but also in the caucus education committee of which Pearce himself was chairperson. He recalls that Labor members had been shocked by the virulent opposition at Murdoch University and the WACAE, and they had been subjected to intense lobbying by the institutions. Pearce indeed afterwards rebuked the institutions for this activity, which he considered went far beyond accepted protocols where the roles of councils were concerned. Nevertheless within the Labor Party there was strong resistance to the privatisation of higher education and any dismantling of Labor's free tuition policy. Watts may not have helped matters at this point by coming out publicly in support of tuition fees for Australian students.⁵⁸

The Curtin University proposal was passed by caucus, however, when the matter returned from the education committee. At the time, State Cabinet swung its weight behind the minister, who had persuaded Premier Brian Burke that the State Cabinet had approved the matter twice: once on an informal basis in January and again in formal session in July. It was too late to shift ground. Once Labor Party support had been assured, the next stage was to prepare a suitable Bill.

Pearce, in an approach to WAPSEC in July to discuss issues affecting WAIT and submissions to CTEC for the 1988/90 triennium, asked it to prepare legislation for the spring session of State Parliament. He asked Pullman to liaise with WAIT in the preparation of a Bill that involved minimal changes to the WAIT Act, but would achieve his objectives.⁵⁹

On legislative detail, the name change was simple enough. As for flexibility and autonomy, changes to the WAIT Act involved removing ministerial approval of appointments to the post of chief executive officer, and also a rewording of the Act to modify slightly the purposes of the institution by

including activities appropriate to university status. Financial freedom under the amended legislation was slightly increased by easing ministerial approval requirements where leasing and disposal of land was concerned, and also in connection with investment of private monies. Universities enjoyed more freedom of investment with both private and public money compared with the CAEs. Although relaxation of these restrictions was opposed in State Treasury circles, Pearce agreed to compromise on investment of private funds by Curtin University.⁶⁰ WAIT had argued for the freedom enjoyed at Murdoch University and UWA. The drafted Bill went to State Cabinet on 24 October and was approved on 3 November 1986.

The State university idea meanwhile was quietly shelved. The idea had considerably alarmed WAPSEC and, in any event, Pearce had no intention of following it up until State Parliament had disposed of the WAIT Amendment Bill. Instead, at the minister's suggestion, WAPSEC undertook to organise a national seminar on the future of the binary system, scheduled for early 1987—after Curtin University had come into being.

WAPSEC simultaneously proceeded with preparation of the State submission to CTEC for the 1988/90 triennium. Pearce, in this connection, argued with both WAPSEC and CTEC for increased funding and student places for Western Australia; a lifting of the earlier restraint on growth at UWA and WAIT (imposed to protect the development of Murdoch University and the WACAE); and for research funding for the new university of technology. The submission was successful in gaining CTEC support for higher levels of per capita funding at WAIT and the WACAE, but encountered criticism on the name change at WAIT. CTEC would support research funds only through arrangements to match research money generated from private sources.⁶¹

The minister introduced the *Western Australian Institute of Technology Amendment Act 1986* in the Legislative Assembly on Tuesday 18 November in a brief second reading address that excited some discontent in both houses.⁶² Lobbying of members by Watts, Sharpham and Dr Peter Reeves, proceeded before and during the debates. The debates themselves attracted little rancour from the Liberal Party, although its leaders anticipated Commonwealth rejection of the funding implications. Andrew Mensaros raised questions about the possible impact of university status on the original role of WAIT, with which he had been associated. He had been convinced by Watts, however, that the name change did not herald any shift in educational functions, and he considered valid the need for research funding. Opposition spokesperson for education, Norman Moore, pursued a similar line in the Legislative Council, where he nevertheless remarked that a better name for the new institution might well be 'Sir Charles Court University of Technology'. Court after all had been the politician most involved in setting up WAIT in the 1960s. Moore did not make a major issue out of the matter, however.

The only real dissent was voiced by M. Stephens, the National Party's deputy leader in the Legislative Assembly. His main complaint was that the authority of State Parliament appeared to have been by-passed by actions at

WAIT to prepare logos and letterheads, and introduce new nomenclature for the chief executive officer and the chairperson of council before the legislation had even cleared the House.⁶³ The Tertiary Institutions Service Centre also had issued publications for 1987 listing WAIT under its proposed new name 'Curtin University of Technology' before the Act had even been passed.

Apart from this hiccup, which was smoothed over quickly, members of both Houses found common cause in challenging the authority of the Commonwealth government. The State Opposition parties indeed rather enjoyed the spectacle of Labor State politicians berating their federal counterparts for their 'centralist' policies. The Nationals, when it came to the point, did not vote against the Bill.

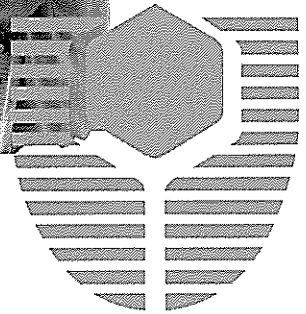
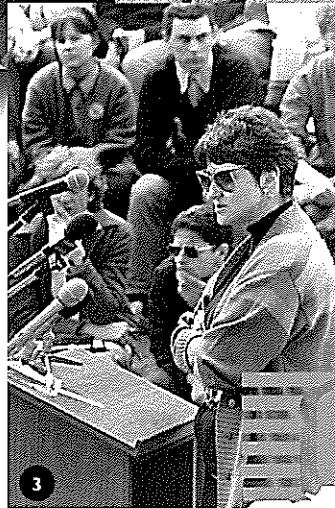
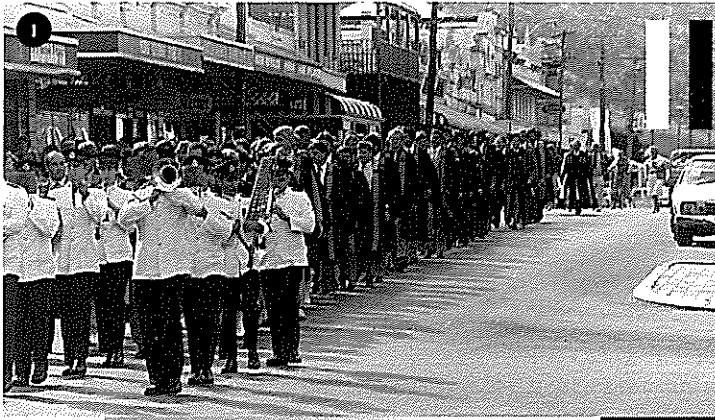
The WAIT Amendment Act was passed on 3 December, with assent granted on 10 December and proclamation dated 19 December, to enable Curtin University of Technology to start operating under its new title from 1 January 1987. Watts, in letters of gratitude to all concerned, explained WAIT's appearing to 'jump the gun' on logos, brochures and letterheads as a necessary measure to prevent confusion among applicants for places in 1987.

Inauguration of Curtin University of Technology

At WAIT since May the council had been busy preparing the ground for 1987. In June decisions were taken on titles, with the names 'chancellor', 'pro-chancellor' and 'vice-chancellor' being accepted, although there had been early support for the title 'president' to conform more to modern American usage.⁶⁴ The council passed necessary amendments to statutes in November, in what was intended to be a highly confidential meeting that nevertheless excited criticism in State Parliament.⁶⁵ Pearce publicly reprimanded the institute for this action.

At the November meeting the WAIT Council approved the new logo and seal for Curtin University, not without a great deal of soul-searching. The new logo designed by J. Davies, who was working to specifications set by a sub-committee, broke completely from the highly distinctive symbol associated with WAIT from its early days. Council members, who had expected this to be incorporated in any new logo, were extremely disappointed when presented with what some viewed as a *fait accompli*. As justification for the change, it was argued that the existing logo was difficult to reproduce and that the new shield-style logo had won approval from the associate directors and the main committees concerned. The council acquiesced, but not without registering some disappointment at what the council saw as a more complete break from WAIT's beginnings than had originally been contemplated.

At its December meeting the council took further steps towards confirming WAIT's newly won university status.⁶⁶ One was to promote several staff to professorial posts: Dr R. B. Alexander (petroleum geochemistry); Dr Brian Dibble (comparative literature); and Dr Terence Smith (chemical engineering). Another step was to plan an inauguration ceremony to be held at the Perth Concert Hall on Monday 25 May 1987. To mark the occasion the council



1 In 1986 the 60th anniversary of the Muresk Institute of Agriculture was marked with a ceremonial procession through the township. Academics and graduates in full regalia were led by the 5th Military District Reserve Band.
2 Viewing a larger-than-life picture of John Curtin on exhibition at WAIT was the former Labor prime minister's daughter, Elsie McLeod, accompanied by State Education Minister Robert (Bob) Pearce to her left, and WAIT Director Dr Don Watts.
3 Commonwealth Education Minister Susan Ryan addressed a packed Atkinson Forum during a visit to WAIT in 1986.
Overlay: New logo adopted for Curtin University of Technology.

decided to create twenty Foundation Fellowships of Curtin University, intended as recognition for particular Western Australians who had contributed in an outstanding manner to the success of WAIT and its progress towards becoming Curtin University. Recipients were to be leaders at WAIT, leaders in Western Australian professional groups, and others whose example had been or would in future be central to the reputation of the new university. All honorary doctors of technology of WAIT, and in future of Curtin University, were to be admitted automatically to the Curtin University Fellowship. The council also introduced the award of Emeritus WAIT Fellowship for past members of the WAIT Council and academic staff, whose outstanding contributions had assisted WAIT in its elevation to university status.

Selected as the first Curtin Fellows were Joan Campbell, Sir James Cruthers, Dame Mary Durack-Miller, Trevor Eckersley, Sir Donald Eckersley, Wilfred Ewers, David Fischer, Denis Horgan, John Horgan, James McNulty, K. D. (Des) O'Sullivan, Kevin Parry, Harry Sorenson and Sister Joan Winch. Council awards of Emeritus WAIT Fellowships went to a group of WAIT's most outstanding academic and other leaders whose names have recurred throughout this book. They were Frank W. Dawson, John Dolin, Dr Norman Francis Dufty, Steve G. Forte, Derek Holroyde, Dr A. H. (Harry) Nash, Howard William Peters, Tom Silvan and Stan T. Waddell.

Postscript

The recognition of Curtin University of Technology by legislation was one thing, gaining recognition in wider university circles was another. This process started in June 1987, when the Association of Commonwealth Universities admitted Curtin University to its membership. In the same month, Curtin University was admitted as a member of the Australian Universities' Industrial Association.⁶⁷ Membership of the Australian Vice-Chancellors' Committee followed later in the year, subsequent to an assessment of Curtin University's overall structure and courses.⁶⁸ It was widely understood throughout Australia that this last recognition was a crucial test-case for other Australian institutes of technology, lined up behind Curtin University for State legislation to transform them into universities.

Pressures were building up on the Commonwealth government too, and particularly its embattled minister for education, to accept that fundamental changes were now inevitable. That transformation followed the federal elections of 1987, when the newly returned Hawke Government initiated a complete upheaval in Australian higher education.⁶⁹ The former minister for trade and the member for Fremantle, John S. Dawkins, became minister for employment, education and training in the new government. Senator Ryan, unseated as minister for education, retired from politics in 1988. Dawkins in September 1987 announced the general thrust of the government's new policies, including the preparation of a Green Paper on higher education. In this he by-passed CTEC, having set up his own committee of inquiry. Among his informal circle of advisers at this point were Dr Don Watts (by then at Bond

University) and Professor Robert Smith, vice-chancellor of UWA. In 1988 the government passed legislation abolishing CTEC, which was replaced by a National Board for Employment, Education and Training, an advisory body headed by Smith. By the end of 1988, according to one writer, the binary system was dead.

In Western Australia one of the key roles for WAPSEC in 1987 was to conduct the national seminar on the theme 'W(h)ither Binary?', held on 17 and 18 March, and attended by both interstate and local visitors.⁷⁰ It was addressed by Dr Edwin Kerr, who provided a discussion of developments in Britain and an assessment of Australian trends. At the seminar something of a consensus emerged, concluding that in Australia separation of funding for research on the one hand, and for teaching and scholarship on the other was probably inevitable. In effect, the creation of Curtin University proved to be the catalyst leading to a reorganisation of Australian higher education, introduced by the new minister, Dawkins, in 1988.

Where WAPSEC was concerned, the new statutory status of Curtin University produced immediate results in two particular fields: one was the removal of requirements to register Curtin University courses with the Australian Council for Tertiary Awards, and with that the need to work within advanced education accreditation arrangements; the other was, at the request of Pearce as minister, that Curtin University was permitted to deal directly with CTEC in Canberra.⁷¹ In other words, no longer did WAPSEC exercise oversight of the Curtin triennial submissions. Its work henceforth was restricted to matters affecting the WACAE, three community colleges and the TAFE system. A Green Paper on the future of WAPSEC and the future of post-secondary education in Western Australia, requested by the minister but conducted from within the Ministry of Education, was completed in 1989. It signalled the end of WAPSEC, which went out of existence in July.⁷²

At Curtin University during 1987 and 1988, the recruitment of overseas students advanced into several new stages. One involved WAIT in a relationship with the International Institute of Business and Technology, which commenced teaching at a campus at Joondalup. Off-shore there were 'twinning' agreements with the Sunway College in Kuala Lumpur and the University of Hong Kong Department of Extension Studies (both in connection with business courses), and also with the Electronic Industries Training Centre of Singapore, in connection with the first two years of Curtin University's bachelor of engineering (electronic engineering) course.⁷³ Policy concerning the operation of twinning arrangements was approved by the Curtin University Academic Board in September 1987. At this time the university also became a party to the Code of Ethical Practice adopted by the Australian Vice-Chancellors' Committee and endorsed by the Department of Employment, Education and Training in Canberra.⁷⁴ Overseas student fees meanwhile enabled a start to be made on a new building at Bentley to house students of the Division of Business and Administration. The housing needs of overseas students also provided the impetus for construction of the first new residential

accommodation at Bentley since 1976, consisting of groups of houses which were given the names 'Watts Village' and 'Vickery Village'.

For present purposes the most significant event of 1987 occurred in July. Curtin University's vice-chancellor, Watts, resigned to take up the post of president and vice-chancellor of the newly established Bond University—Australia's first private university. He took with him his secretary Ann Sloan, who before Watts had also been secretary to Dr Haydn Stanley Williams and, therefore, virtually an institution at WAIT throughout its twenty-year history.

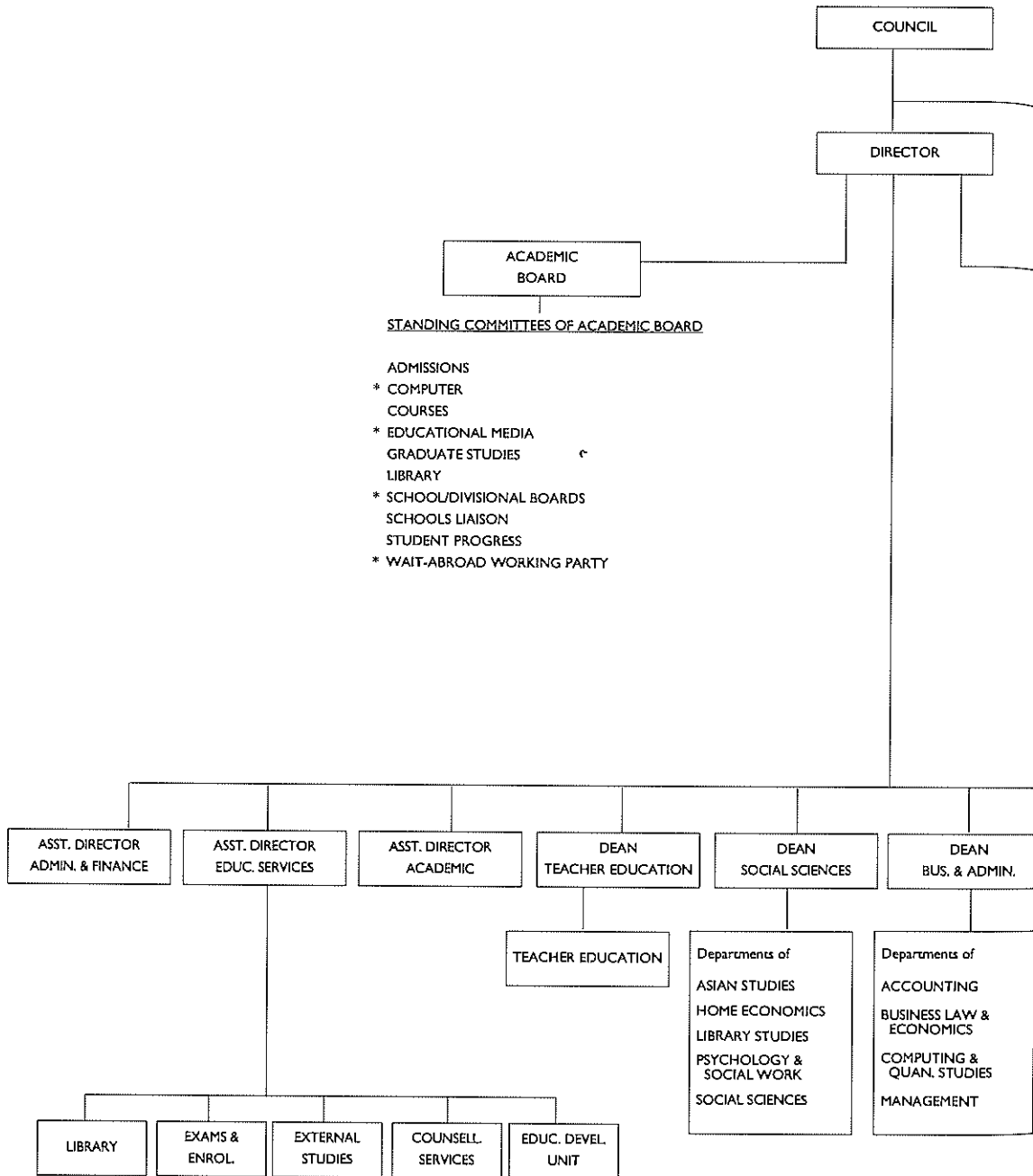
Dr John de Laeter acted as vice-chancellor at Curtin University until the appointment in 1988 of Dr John Maloney, an Australian with extensive overseas experience in Canada. He stepped into a post held previously by two of Australia's most influential leaders in higher education, both associated in their own particular ways with changing national policy in advanced education. By the time Williams retired in 1979, WAIT had grown from a small and relatively obscure college into one of Australia's largest, most comprehensive and highly respected CAEs. His successor, Watts, took WAIT one step further to give it a high national profile in research and, eventually, to transform it into a university of technology. The establishment of Curtin University of Technology opened the flood-gates of higher education reform in Australia. Whether that transformation succeeds or fails continues to occupy the minds of all who are involved in Australian higher education in the last decade of the twentieth century.

Appendixes

- 1. General organisation as at December 1975**
- 2. Academic staff at WAIT, 1968**
- 3. Schedule of building contracts at WAIT Bentley campus, 1963-73**
- 4. Student enrolment by department, 1967-70
Student enrolment by status, 1967-71**
- 5. Enrolment figures of FTES, 1976-81**
- 6. Per capita costs and selected statistics related to DOCIT colleges in Australia, 1978**
- 7. General organisation as at December 1984**

APPENDIX I

General organisation as at December 1975



* Committees report to both Academic Board and Planning & Resources Board.

Source: WAIT, *Annual Report 1975*.

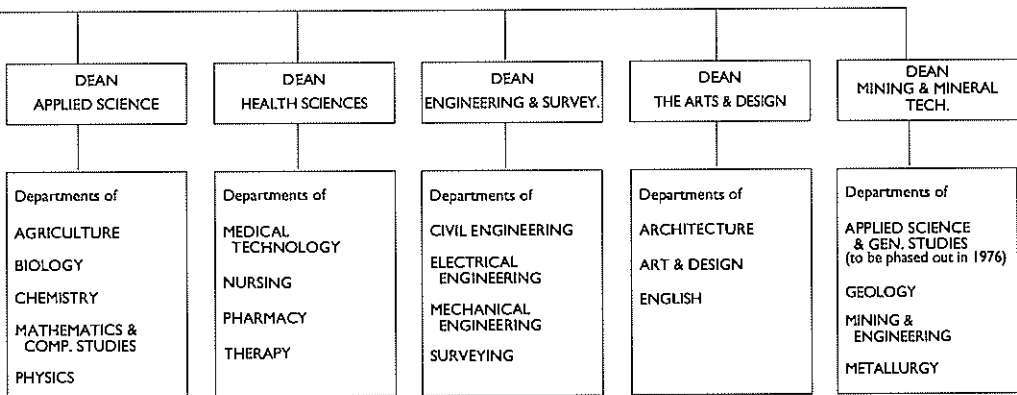
COUNCIL STANDING COMMITTEES

- CAPITAL WORKS
- FINANCE & STAFFING
- EDUCATION & GENERAL POLICY
- EMERGENCY
- LEGISLATIVE
- STUDENT DISCIPLINARY STATUTE APPEALS

PLANNING & RESOURCES BOARD

STANDING COMMITTEES OF PLANNING & RESOURCES BOARD

- ACADEMIC STAFF DEVELOPMENT
- ART ACQUISITIONS
- ARTIST-IN-RESIDENCE
- BUILDING PROJECT
- CAFETERIA
- CAMPUS DEVELOPMENT
- ELECTRON OPTICAL EQUIPMENT
- ENDOWMENTS
- EQUIPMENT
- FURNISHINGS
- PARKING & TRAFFIC
- PUBLICATIONS
- RECREATIONAL FACILITIES BOARD
- ROYALTIES
- SAFETY
- SPACE UTILISATION
- WAIT COMMUNITY INTERIM BOARD



APPENDIX 2

Academic staff at WAIT, 1968	
Physics	
Head:	J. R. de Laeter
Senior lecturers:	R. E. Price, B. W. Thomas, W. L. Walker
Lecturers:	I. H. Bailey, J. R. Birkelund, J. A. Deacon, M. E. Sproul, N. F. Uren, G. C. Kerrigan, J. D. Penrose, K. W. Terry, R. Date, M. J. Lynch, L. F. Toussaint, S. Gunson
Senior tutors:	K. Harris, R. C. Lullfitz
Mathematics	
Head:	S. T. Waddell
Senior lecturers:	S. Wright, R. Hartley
Lecturers:	J. W. Andrew, W. N. Bardsley, S. G. Force, N. C. Hanslip, M. Haydock, M. Herman, D. McIntyre, J. Malone, J. E. Sutherland, B. A. White
Chemistry	
Head:	M. Liveris
Senior lecturers:	J. F. Chambers, B. R. Hammond, N. B. Snell
Geology:	R. T. Brandt
Lecturers:	
Organic chemistry:	R. Alexander, S. G. Errington, A. Jefferson, G. D. Leahy, C. I. Stacey, I. C. Bond
Physical/Inorganic chemistry:	W. A. Millen, J. R. Ford, A. Parentich, K. J. Bleakley, A. Middleton, H. C. Hughes, D. N. Phillips
Geology:	W. R. Morgan
Senior tutors:	L. R. Mullings, P. G. Whalley
Pharmacy	
Head:	T. J. Betts
Senior lecturer:	G. J. Tucker
Lecturers:	J. C. Baird, S. G. Kailis, C. A. Marshall, M. A. Page, V. B. Sutherland, R. J. Langham
Senior tutors:	J. Burke, T. H. Blythe
Medical Lab. Technology	
Senior lecturer:	A. Houghton
Lecturers:	A. P. Barton, J. G. Scott, W. E. Reed, J. R. Neal
Senior tutor:	K. O. Cox
Biology/Physiology	
Senior lecturer:	B. G. Collins
Lecturers:	L. F. Gibbney, E. Lingren, A. G. Newland
Senior tutor:	R. Rippingale
Engineering	
Civil	
Head:	G. T. Myles
Senior lecturer:	C. W. Kinnean
Lecturers:	J. P. Kerr, K. C. Middleton-White, M. J. Press, D. N. Redfern
Surveying/Cartography	
Senior lecturer:	S. W. Munsie

Continued next page

Lecturers:	M. Balodis, R. E. Black, J. A. L. Cavill, S. B. Montgomery, J. van Hattem, M. C. Williamson
Electrical	
Head:	A. G. Cook
Senior lecturers:	E. L. Bradshaw, R. J. Skevington
Lecturers:	T. McDochery, D. A. Drayson, D. A. Farquar, L. B. Hainsworth, G. H. T. Hatton, E. Lovell, I. G. Sutherland, K. K. Mukhopadhyaya, F. Wallis
Mechanical	
Head:	W. L. A. Munro
Senior lecturers:	G. H. Moore, F. R. Norris, G. V. T. Ranzetta
Lecturers:	G. W. Beech, J. G. Blurton, J. E. Cousins, A. Geljssel, W. Gorski, J. P. Kerr, J. W. Miller, R. S. Noakes, R. P. J. Pillow, D. R. Shalley, H. Tooby
Senior tutor:	R. T. Saleh
Architecture	
Head:	A. L. R. Camerer
Senior lecturers:	A. C. Douglas, R. J. Dyer
Lecturers:	M. D. Beasley, M. C. Edwards, S. R. Shaw, T. Vass, C. C. Holloway, R. V. Blatchford, H. W. Jones, P. W. Little, D. C. M. Richards, J. G. Brown, D. S. Phillip, G. B. Sneesby, J. R. Baxter, A. J. Gray, B. A. Tomlinson
Art & Design	
Head:	A. K. Russell
Senior lecturers:	D. H. Simpson, J. H. Child
Lecturers:	L. J. Littman, L. J. Pritchard, G. A. South, A. C. Russell, I. C. Wroth, J. M. Whitcombe
Senior tutors:	N. M. Farman, G. Haynes, P. Whitchurch, N. Sellick
Accounting & Business Studies	
Head:	C. D. C. Sears
Senior lecturers:	A. J. Butchart, G. A. Idle, R. R. Winfield
Lecturers:	J. K. Allan, T. W. Binns, W. V. Boylson, S. S. Cook, K. S. Chin, R. W. Cooke, F. S. Farrant, W. S. W. Glossop, V. M. Pervan, C. G. Palmer, R. O. Wilton, J. E. Worthington
Administrative Studies	
Head:	C. E. Carr
Senior lecturers:	R. E. Robertson, J. G. Williams
Lecturers:	D. Baker, D. D. McBeath
General Studies	
Head:	E. D. Atkinson
Senior lecturers:	A. J. Gilbert, W. S. Cooper, I. L. R. Vincent
Lecturers:	J. Finch, A. Hoffman, P. G. Kemeny, D. Black, B. W. Griffiths, R. Tweedie, R. Harrold, R. McKeich, R. Morland, N. J. Saunders, D. Sujatna, M. Ogawa
Senior tutors:	D. Addenbrooke, M. Masubuchi
Home Economics	
Head:	E. J. Callander
Senior lecturer:	P. Maggiore
Lecturers:	L. G. Adams, N. M. Gerondal
Senior tutors:	D. Day, E. L. Justins, E. F. Newton

Source: WAIT, *Handbook 1969*.

APPENDIX 3

Schedule of building contracts at WAIT Bentley campus, 1963-73

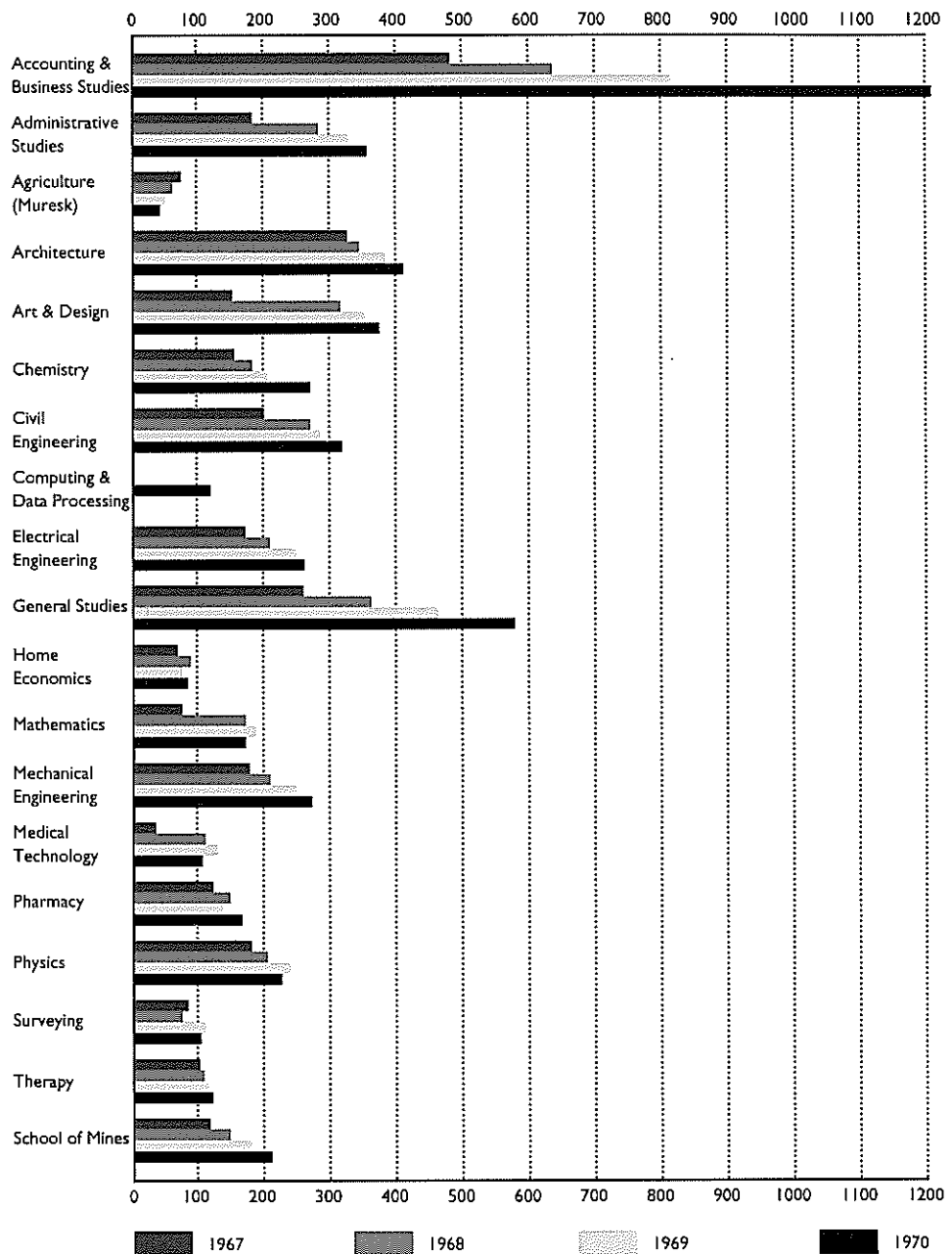
Project	Contract Commenced	Building Commissioned	Project Value* (\$k)
Chemistry & pharmacy	Oct. 1963	Feb. 1965	—
Maths & physics	March 1964	Feb. 1966	2,376
Administration building, hall & cafeteria	Sept. 1966	Dec. 1967	1,510
Extensions to chemistry building & maths building 'B'	April 1967	Feb. 1968	848
Pharmacy building	Aug. 1968	Feb. 1969	280
Architecture building (first contract)	May 1968		
(completion contract)	May 1969	Feb. 1971	2,228
Maintenance workshops & central store (temporary art & design)	mid-1969	Feb. 1970	259
Library	Jan. 1970	Oct. 1971	2,290
Extensions to physics building	July 1970	Feb./May 1971	320
Watson Lecture Theatre No. 3	Nov. 1970	Jan. 1972	87
Computing & data processing building	Dec. 1970	Sept. 1971	330
Student Guild building	Dec. 1970	Dec. 1971	250
Maintenance workshops extensions	Oct. 1971	April 1972	46
Commerce & social sciences building—stage 1	April 1971	Mar./May 1972	1,280
Medical technology building	Feb. 1972	Feb. 1973	1,280
Sports pavilion	Sept. 1972	Feb. 1973	45
Engineering general facilities building	Dec. 1972	under construction	1,933
Commerce & social sciences building—stage 2	Feb. 1972	under construction	2,280

* Project Value is the book cost for completed projects or the budget for projects under construction. Includes furnishings and equipment, fees and other initial capital costs.

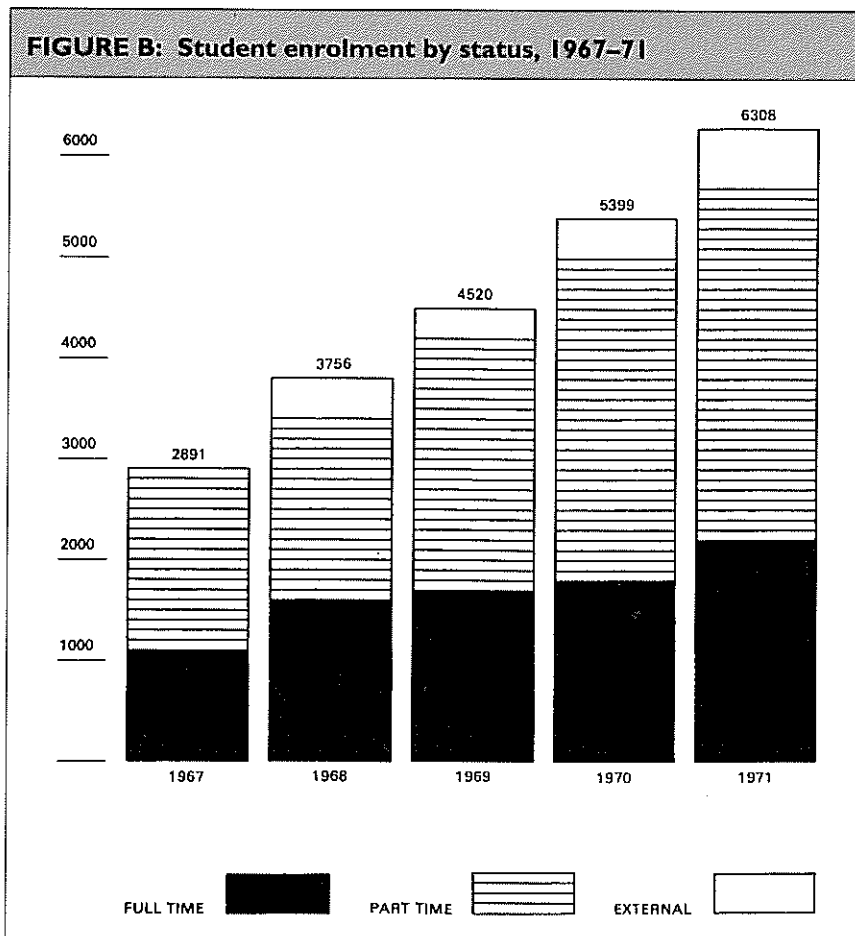
Source: J. S. Finney, *Planning for Uncertainty. A Case Study—WAIT*, ANU Centre for Continuing Education, Canberra, 1973 (March).

APPENDIX 4

FIGURE A: Student enrolment by department, 1967-70



Source: WAIT, *Annual Report 1970*.



Source: WAIT, *Annual Report 1971*.

APPENDIX 5

Enrolment figures of FTES, 1976-81						
	1976	1977	1978	1979	1980	1981
Arts, Education, Social Sciences						
Architecture & planning	279.0	301.0	330.0	325.5	320.0	337.0
Art & design	370.5	377.5	365.0	366.0	314.5	302.5
English	350.5	369.5	341.5	411.5	428.5	459.0
Social sciences	772.0	727.0	682.0	610.0	572.5	572.5
Education	627.5	674.5	706.5	743.0	770.5	751.0
Library studies	318.4	294.5	296.5	280.5	251.5	253.5
TOTAL	2,891.0	2,993.0	2,931.0	2,976.5	2,887.5	2,886.5
Business & Administration						
Accounting	819.0	769.5	1,048.0	1,049.0	994.5	963.5
Business law	63.5	61.0	49.5	32.0	30.5	32.5
Computing & quant. studies	149.0	190.5	221.0	279.5	306.5	342.5
Economics & finance	106.0	125.5	164.0	156.0	218.5	211.0
Management	391.5	392.5	418.0	444.5	405.5	432.0
Divisional courses	552.0	540.5	133.0	105.0	148.0	213.0
TOTAL	2,081.0	2,079.5	2,033.5	2,066.0	2,103.5	2,194.5
Engineering & Science						
Divisional engineering courses	—	—	153.5	160.0	198.0	209.5
Civil engineering	184.5	160.0	136.0	118.5	117.0	108.5
Electrical/electronic	284.5	282.0	210.0	210.5	192.5	187.5
Process engineering	213.0	185.5	136.5	115.5	112.0	143.5
Surveying & mapping	136.5	172.0	157.0	148.5	126.5	114.5
Divisional science courses	42.0	41.0	52.5	67.5	75.0	87.0
Biology	135.5	138.5	144.0	127.5	155.0	157.0
Applied chemistry	91.5	87.5	90.0	97.5	101.0	33.0
Natural resources	—	16.0	12.5	14.5	18.5	17.0
Maths & computing studies	166.0	165.5	159.5	157.5	152.0	163.0
Muresk (agriculture)	145.5	131.0	159.0	163.5	137.0	219.0
Physics & geo. sciences	173.5	158.0	165.0	159.5	187.0	176.5
TOTAL	1,565.5	1,537.0	1,575.5	1,540.5	1,601.5	1,671.0

Continued next page

Enrolment figures of FTES, 1976-81 (continued)						
	1976	1977	1978	1979	1980	1981
Health Sciences						
Behavioural sciences	315.5	338.0	376.0	374.0	361.5	334.0
Community health	80.0	97.0	16.5	154.0	160.5	209.0
Medical technology	149.0	175.5	205.0	219.5	215.5	216.0
Nursing	136.5	149.5	153.5	158.0	210.5	238.5
Occupational therapy	128.5	150.0	150.5	156.0	152.0	167.0
Pharmacy	139.0	141.5	143.0	146.0	141.0	143.5
Physiotherapy	212.0	214.0	206.5	219.5	234.5	231.0
TOTAL	1,160.5	1,265.5	1,351.0	1,427.0	1,475.5	1,539.0
School of Mines						
Business/accounting	13.5	16.5	37.0	45.0	39.0	29.5
Geology	3.0	5.5	10.5	11.0	21.0	20.5
Metallurgy	24.5	36.0	32.0	33.5	45.5	24.0
Mining & engineering	4.5	7.0	19.0	16.0	20.0	24.0
TOTAL	71.0	58.0	87.8	77.0	97.0	97.0
GRAND TOTAL	7,810.0	7,931.0	8,058.0	8,176.5	8,260.5	8,495.5

Source: WAIT, *Statistics 1981*, pp. 84-98.

Note: This is a summary compiled from the official statistics.

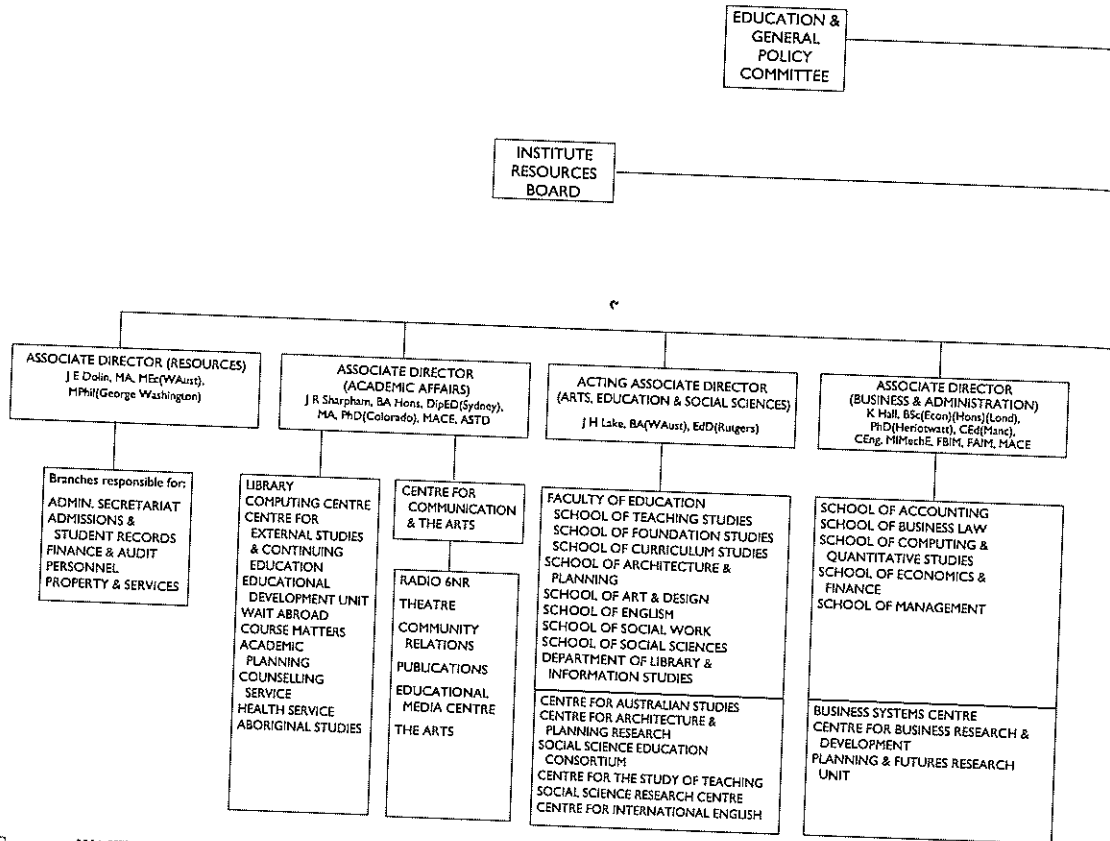
APPENDIX 6

Per capita costs and selected statistics related to DOCIT colleges in Australia, 1978							
Category	Institution						
	NSWIT	Tas. CAE	WAIT	Canb. CAE	SAIT	QIT	RMIT
Direct teaching (\$)	1,613	1,805	1,447	1,382	1,355	1,279	1,031
Library (\$)	79	174	178	187	102	66	80
Computing (\$)	80	5	57	108	47	47	49
Administration (\$)	520	284	288	492	164	324	211
Buildings (\$)	282	190	308	102	148	114	164
No./FTES	3,147	1,893	6,495	2,487	4,053	3,740	6,866
Per capita cost/FTS (\$)	2,643	2,620	2,408	2,388	1,872	1,858	1,623
Approx. budget (millions \$)	8.3	4.9	15.6	15.9	7.6	6.9	11.1

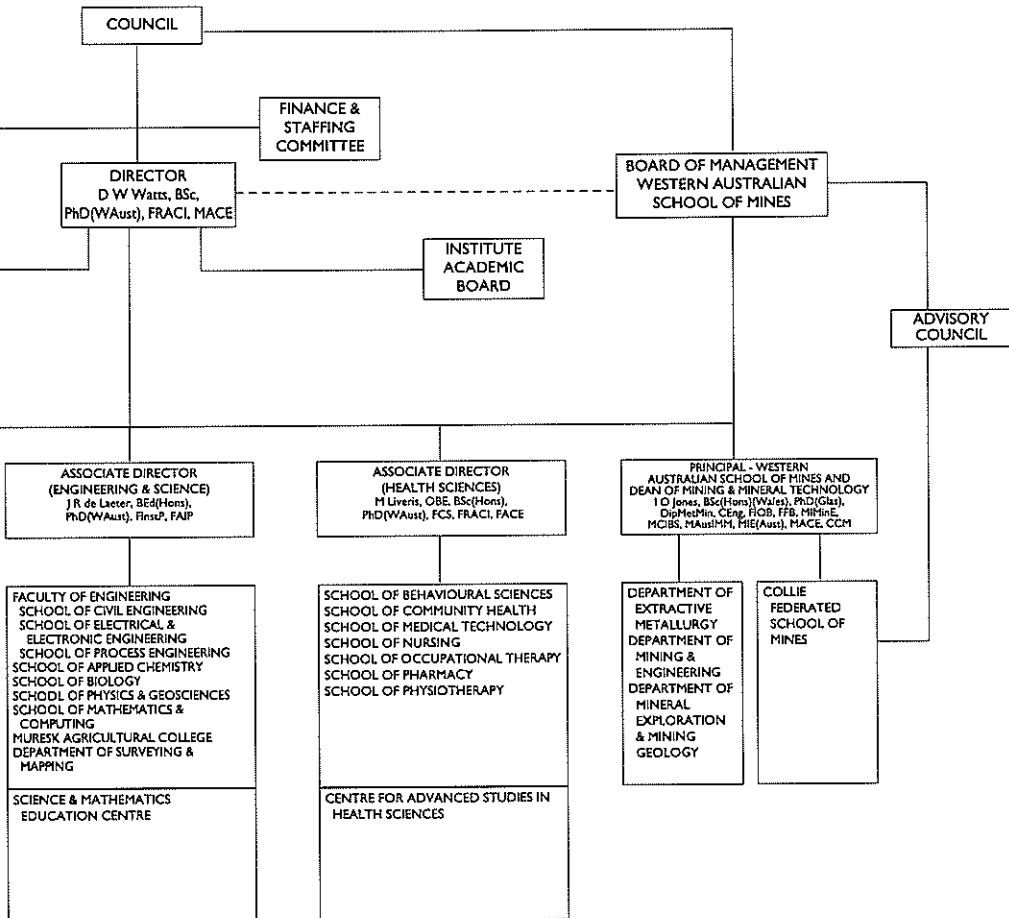
Source: WAIT Council minutes, 21 May 1975, director's report to WAIT Council.

APPENDIX 7

General organisation as at December 1984



Source: WAIT, *Annual Report 1984*.



Notes

Chapter I

- ¹See M. A. White, 'L. W. Phillips—a biographical sketch' in *History of Education Review*, vol. 19, no. 1, 1990, pp. 43–53.
- ²For a detailed examination of post-school education in WA, see White, *The Community and Post-School Education in Western Australia*, Technical Publications Trust, Perth, 1981; F. Alexander, *Campus at Crawley*, UWA Press, Perth, 1963.
- ³Personal interview with H. S. Williams, 1988.
- ⁴Personal file of W. G. Hayman, Education Dept file 2034/15.
- ⁵Hayman to T. L. Robertson, 24 Apr., 22 Oct. 1954, Education Dept file 1428/65.
- ⁶Notes of meeting between Town Planning Commissioner J. A. Hepburn and the principal of Perth Technical College, 17 July 1956, Town Planning file 704/2/10/2.
- ⁷Surveyor-general to deputy surveyor-general, 1 July 1954, Lands Dept file 3052/54, vol. 1.
- ⁸Robertson to minister for education, 22 May 1956, Education Dept file 1428/65.
- ⁹Hayman to Robertson, 30 Aug., 6 Sept., 8 Oct. 1954, Education Dept file 1428/65.
- ¹⁰Robertson to vice-chancellor, UWA, 5 Apr. 1957; Robertson to minister for education, 22 May 1956, Education Dept files 1428/65, 1489/65.
- ¹¹Robertson, submission to Committee on Australian Universities (Murray), Education Dept, 1957.
- ¹²Record of meetings, 17 July, 3 Aug. 1956, Town Planning Commission file 704/2/10/2.
- ¹³Record of meeting, 15 July 1957, committee set up to investigate the future location of the Perth Technical College, *Report*, July 1957, Town Planning Commission file 704/2/10/2.
- ¹⁴Proposed itinerary, 28 May 1958; notes on buildings of the new college of technology to replace the Perth Technical College, in Hayman's personal papers.
- ¹⁵Interview with Sir Charles Court, 1988.
- ¹⁶Robertson to minister for education, 21 Sept. 1959, Education Dept file 1428/65.
- ¹⁷Hayman to Robertson, 10 Nov. 1959, Education Dept file 2012/57.
- ¹⁸Hayman to Robertson, 7 Dec. 1960, Architectural brief, proposed institute of technology, in Hayman's personal papers.
- ¹⁹*The West Australian*, 20 June 1962.
- ²⁰Draft proposals, Principal Architect's Office, probably by V. F. U. Davies, early 1961, Town Planning Commission file 704/2/10/2.
- ²¹K. Townsing to the treasurer, 5 Dec. 1961, Treasury Dept file 141/61.
- ²²*The West Australian*, 27 Apr., 28 Apr. 1962.
- ²³Robertson to chairperson, Perth Technical College site committee, 20 Mar. 1962, Treasury Dept file 141/61; discussion about Girdlestone Girls' School area in Education Dept files 2239/35, 1217/59, 1218/19, 1606/52.
- ²⁴*The West Australian*, 24 May, 19 June 1962.
- ²⁵Gregson to Perth Technical College site committee, 14 Aug. 1962, Treasury Dept file 141/61.
- ²⁶*The West Australian*, 28 June 1962.
- ²⁷Premier D. Brand to prime minister, 23 June 1965, Treasury Dept file 65/66.
- ²⁸Robertson to Townsing, 15 May 1962; under-secretary, Public Works Dept, to forests commissioner, 3 Feb. 1963, Public Works Dept file 1137/61.
- ²⁹*Report on the Future of Tertiary Education in Australia* (Martin Report), Govt Pr., Canberra, 1964.
- ³⁰CACAE (Wark), *Colleges of Advanced Education: Report for the First Triennium 1967/69* (First Wark Report), Govt Pr., Canberra, 1967.
- ³¹Commonwealth assistance approval/revised estimates, 1 Feb. 1966; W. J. Paterson to deputy under-treasurer, 7 Dec. 1965, Curtin University (WAIT) file E2108–1.
- ³²See prime minister to premier, 13 Aug. 1965; Townsing to I. Wark, 5 Nov. 1965, Treasury Dept file 65/66.
- ³³Notes of meeting chaired by Deputy Under-Treasurer J. R. Ewing, with representatives of Education Dept, Mines Dept and Architectural Division of the Public Works Dept, 1 Nov. 1965, Treasury Dept file 65/66.
- ³⁴*The West Australian*, 18 Aug. 1966, p. 14.
- ³⁵Pan-Indian Ocean Conference on Technical Education and Training, *Conference Report*, Carrolls, Perth, 1966.
- ³⁶Robertson to minister for education, 2 Aug. 1966; also premier to R. Davies, 24 Apr. 1966, Treasury Dept file 70/65; *Daily News*, 27 Apr. 1966.
- ³⁷Robertson, 2 Aug. 1966, Treasury Dept file 70/65.
- ³⁸*ibid.*
- ³⁹*The West Australian*, 11 Aug. 1966.
- ⁴⁰Robertson to secretary, Committee on Tertiary Education in WA (Jackson), 22 Aug. 1966, Treasury Dept file 70/65.
- ⁴¹Interim Report, 13 Oct. 1966, which forms part of app. V of *Tertiary Education in Western Australia* (Jackson Report), Govt Pr., Perth, 1967.
- ⁴²Williams, 'The development of the Western Australian Institute of Technology', *The Australian University*, vol. 5, no. 1, Apr. 1967, pp. 42–52.

⁴³Recollections of the debate at conference of the Australian College of Education, Bunbury, 1966.

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¹M. A. White, The specific and interrelated tasks of institutions of tertiary education in WA, PhD thesis, UWA, 1968, chs 3 and 4.

²L. Hollis memorandum, in WAIT archives.

³See C. E. Carr, The changing college—a study in organisational dynamics, MA thesis, UWA, 1966, ch. 4; also N. F. Dufty, The organisation of a tertiary technical institution in Australia, MEd thesis, UWA, 1966.

⁴Interim Council, 22 Feb. 1967.

⁵WA, Parliament, *Debates*, vol. 175, 17 Nov. 1966, p. 2508; 24 Nov. 1966, pp. 2810–11.

⁶T. L. Robertson papers, in Curtin University archives.

⁷Correspondence in WAIT file: Architect for CACAE; also H. S. Williams, 'A new look at buildings for advanced education', *WAIT Gazette*, vol. 1, no. 1, Feb. 1968, pp. 10–12.

⁸WAIT Council, 15 Oct. 1969; *WAIT Gazette*, vol. 4, no. 2, Mar. 1971, p. 7.

⁹WA, Parliament, *Debates*, vol. 180, 1968, pp. 1249–50; vol. 183, 1969, pp. 655–6.

¹⁰Interview with A. H. Nash, 1988.

¹¹Interview with Dufty, 1988.

¹²R. A. Coombe's *curriculum vitae* in WAIT personal file.

¹³Personal files of H. W. Peters; and interview with Williams, 1988.

¹⁴See *The West Australian*, Apr. 1967 issues, which are full of comment on the matter.

¹⁵*ibid.*

¹⁶Interim Council, 19 June, 5 July, 18 Sept. 1967.

¹⁷Register of minutes of Management Board, WAIT file A1013–1.

¹⁸WAIT file A1006.

¹⁹Peters to assistant directors, 24 June 1968, WAIT file A1006.

²⁰Interview with Dufty, 1988.

²¹Peters to Carr, 21 Feb. 1968, WAIT file A1006.

²²Address to staff by Williams, Jan. 1968.

²³Circular AD–5 from Peters, 29 Jan. 1969, WAIT file A1006.

²⁴WAIT Council, 19 Nov. 1969.

²⁵WAIT Council, 16 July 1969; 17 Feb. 1970; 17 Mar., 21 Apr. 1971.

²⁶J. de Laeter to Williams, 18 Sept. 1969, WAIT file A1006.

²⁷Meeting of representatives of WAIT and the Technical Education Division, 21 June 1967, and subsequent correspondence, WAIT file A1035–1.

²⁸White, *op. cit.*

²⁹Internal departmental reports (administration) 1968, p. 7.

³⁰Interviews with H. Girvan-Brown, 1988; and P. Yacopetti, 1988.

³¹Interim Council, 19 May 1967.

³²WAIT *Gazette*, vol. 2, no. 5, June 1969, p. 8.

³³See WAIT *Gazette*, vol. 1, no. 2, July 1968, p. 6.

³⁴Interim Council, 17 Jan., 19 Jan. 1968; WAIT, *Annual Report 1968*, p. 6.

³⁵J. S. Finney, *Planning for Uncertainty. A Case Study*—WAIT, ANU Centre for Continuing Education, Canberra, 1973, which deals with the architectural development over this period.

³⁶Interim Council, 7 Aug., 28 Aug., 20 Oct., 28 Nov., 18 Dec. 1967.

³⁷WAIT Council, 21 May, 17 Dec. 1969; 10 Nov. (extraordinary meeting), 10 Dec. 1971.

³⁸Address to staff by Williams, Feb. 1974, pp. 5–7.

³⁹WA, Parliament, *Debates*, vol. 188, 20 Oct. 1970, pp. 1360–4, 1574–9.

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⁴¹Correspondence in Wark papers (I. Wark), Australian Academy of Science, ASAP acc. 6/6/85, diary notes 6/6: 27/6/69 – 5/11/71, no. 29, 9 Dec. 1969.

⁴²Address to staff by Williams, Feb. 1975, p. 13.

⁴³CACAE (Wark), *Colleges of Advanced Education: Report for the First Triennium 1967/69* (First Wark Report), Govt Pr., Canberra, 1967, ch. 1; from the WAIT point of view, see Interim Council, 17 Apr., 22 May 1968; and Academic Board, 14 Mar. 1969.

⁴⁴WAIT, submission to the Commonwealth Commission on Advanced Education for the third triennium 1973/75, WAIT, 1972.

⁴⁵Conference, Year of Review 1971, reported in WAIT file A1029–1.

⁴⁶Wark papers, *op. cit.*, discussion notes, 28 Apr. 1971.

⁴⁷*ibid.*, 17 Apr. 1971.

⁴⁸*ibid.*

⁴⁹WAIT Council, 15 Mar. 1972; Commonwealth Commission on Advanced Education, *Report for the Third Triennium 1973/75*, AGPS, Canberra, 1972, p. 18.

⁵⁰A full newspaper clipping file has been kept on the case, WAIT file PR–6b.

⁵¹Internal annual reports, 1971, central administration boards and committees, p. 208.

⁵²Peters, memorandum, 12 Jan. 1971, in collected papers of Management Board.

⁵³WAIT Council, 16 Aug. 1972.

⁵⁴Report of committee of WAIT Council, 9 Sept. 1972, in collected papers of Management Board.

⁵⁵WAIT *Gazette*, vol. 6, no. 4, May–June 1973, p. 19.

⁵⁶Management Board, 13 Feb. 1973.

- ⁵⁷Planning and Resources Board, 22 May 1973.
⁵⁸Management Board, summary of outcomes of Year of Review 1971, 11 Apr. 1972.
⁵⁹Management Board, 10 Nov. 1970; 13 June, 27 June, 11 July 1972; WAIT Council, 16 Aug. 1972.
⁶⁰WAIT Council, 21 Mar. 1973.
⁶¹WAIT Council, 17 Apr. 1974.
⁶²WAIT Council, 23 Nov. 1973.
⁶³WAIT Council, 20 Feb. 1974.
⁶⁴WAIT Council, 21 July 1971.
⁶⁵Internal annual reports, 1973, p. 342.
⁶⁶*ibid.*
⁶⁷WAIT, submission to the Commonwealth Commission on Advanced Education for the fourth triennium 1976/78, WAIT, 1975.
⁶⁸M. G. Walker, *Towards a True Community College*, WAIT, 1974; address to staff by Williams, Feb. 1972.
⁶⁹Commonwealth Commission on Advanced Education, *Report for the Fourth Triennium 1976/78*, AGPS, Canberra, 1975, pp. 131–5.
⁷⁰WAIT Council, 9 Dec. 1974; WAIT *Gazette*, vol. 8, no. 2, Apr. 1975, p. 16.

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- ¹Minutes and correspondence in Lands Dept file 3052/54, vol. 1.
²T. L. Robertson to K. Townsing, 15 May 1962; under-secretary, Public Works Dept, to forests commissioner, 3 Feb. 1963, Public Works Dept file 1137/61.
³V. F. U. Davies, 'The Western Australian Institute of Technology', *The Architect*, June 1963.
⁴*Construction Review*, vol. 39, no. 2, Feb. 1966, pp. 9–15.
⁵*The West Australian*, 14 June 1965.
⁶Teachers' Union to Premier D. Brand, 23 Nov. 1964, Public Works Dept file 1137/61.
⁷Minister for Education E. Lewis to Robertson, 1 Apr. 1965, Public Works Dept file 1137/61.
⁸Principal architect, design, 16 June 1965, Public Works Dept file 1137/61.
⁹Interim Council, 17 Apr., 22 May 1968; WAIT *Gazette*, vol. 1, no. 6, Nov. 1968, pp. 8–9.
¹⁰WAIT Council, 16 July 1969.
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¹²From information in two unpublished papers (at time of writing): one by H. S. Williams; and another by G. Allen, Notes on the history of the WAIT library.
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¹⁵Management Board, 4 Oct. 1968; Interim Council, 16 Oct. 1968.
¹⁶WAIT Council, 20 May 1970.
¹⁷J. S. Finney, *Planning for Uncertainty. A Case Study—WAIT*, ANU Centre for Continuing Education, Canberra, 1973.

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¹⁹WAIT *Gazette*, vol. 7, no. 9, Dec. 1974, p. 25; vol. 8, no. 8, Nov. 1975, pp. 10–11.
²⁰From discussions with J. Perry, the forester responsible for much of the early scientific work on the pine forest.
²¹See details in WAIT file B5003; also 'Institute landscaping', WAIT *Gazette*, vol. 2, no. 9, Oct. 1969, p. 7; J. Davies memorandum, submission on development of institute grounds, 2 Aug. 1968, WAIT file B5011–4.
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³⁰Planning and Resources Board, 18 July 1978, architect's report.
³¹Interview with A. Barblett, 1988; WAIT *Gazette*, vol. 11, no. 4, Dec. 1978 (cover illustrations).

Chapter 4

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⁵R. A. Coombe and H. W. Peters, *Planning and Management in Tertiary Education*, WAIT, n.d.
⁶Williams, Assessment of priorities, paper delivered at conference of the Australian College of Education, Sydney, May 1972; J. Braysich, The functions of the WA Institute of Technology, PhD thesis, University of Michigan/xerox microfilms, 1971; J. G. Williams, Goals in the WA Institute of Technology, PhD thesis, UWA, 1974.
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⁸T. L. Robertson, address to WAIT graduates, June 1968, in Robertson papers, Curtin University archives; address to UWA graduates, 24 Aug. 1968; WAIT, *Annual Report 1968*, p. 8.

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- ¹⁰Management Board, 23 Oct., 13 Nov. 1969.
- ¹¹Management Board, 19 Mar. 1969; WAIT *Gazette*, vol. 5, no. 6, Sept. 1972, p. 24.
- ¹²Management Board, 10 Apr. 1968; Interim Council, 21 Aug. 1968, 19 Feb. 1969; WAIT Council, 18 June 1969.
- ¹³WAIT, *Annual Report 1970*, p. 10.
- ¹⁴WAIT *Gazette*, vol. 1, no. 6, Nov. 1968, p. 10.
- ¹⁵WAIT Council, 21 Oct. 1970, 21 Mar., 18 Apr. 1973.
- ¹⁶WAIT *Gazette*, vol. 1, no. 2, July 1968, p. 4; Management Board, 2 Sept. 1969.
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- ²¹WAIT, *Annual Report 1971*, p. 12.
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- ³³Interim Council, 7 Aug., 18 Sept., 24 Nov. 1967.
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- ³⁷WAIT Council, 19 Aug. 1970; WATEC, *Annual Report—1972*, Perth, 1972, p. 1.
- ³⁸WAIT Council, 15 Sept. 1971.
- ³⁹For a more detailed description see M. A. White, *The Community and Post-School Education in Western Australia*, Technical Publications Trust, Perth, 1981, chs 5 and 6.
- ⁴⁰Interim Council, 7 Aug. 1967; Peters to Williams, 20 Nov. 1967, WAIT file A1013-1; Management Board, 18 Dec. 1967.
- ⁴¹Management Board, 2 Feb., 6 Mar. 1968; Interim Council, 17 Apr. 1968; Sanders, WATEC, to minister for education, 9 Oct. 1970, Education Dept file 2091/66.
- ⁴²WAIT, *Annual Report 1970*, p. 22; *Annual Report 1971*, p. 24.
- ⁴³A fuller explanation of this point is in White, 'The specific and interrelated tasks of institutions of tertiary education in WA, PhD thesis, UWA, 1968, pp. 435-43.
- ⁴⁴C. E. Carr, 'Staff education programme', WAIT *Gazette*, vol. 1, no. 2, July 1968, p. 12.
- ⁴⁵Address to staff by Williams, 1969.
- ⁴⁶Nash, *Student Progress, Attitudes and Performance in Electrical Engineering Courses at the Western Australian Institute of Technology*, WAIT, 1969.
- ⁴⁷Interview with N. F. Dufty, 1988.
- ⁴⁸ASA, paper for Academic Board, 22 June 1973; Management Board, 6 Apr., 8 June 1971; address to academic staff by Williams, 22 Feb. 1971; report of committee of Academic Board, 23 Mar. 1973.
- ⁴⁹Williams to R. E. Black, ASA, 6 Nov. 1969, WAIT file G3005.
- ⁵⁰Management Board, 18 Feb. 1969.
- ⁵¹A. J. Lonsdale, 'Education Development Unit', WAIT *Gazette*, vol. 5, no. 2, Apr. 1972, p. 4.
- ⁵²CACAE (Wark), *Report for the Second Triennium 1970/72* (Second Wark Report), Govt Pr., Canberra, 1969, pp. 45, 89.
- ⁵³D. H. Simpson to Peters, 23 Apr., 12 June 1969, WAIT file A1006; Management Board, 13 July 1970, 23 Feb. 1971; Planning and Resources Board, 19 Oct. 1971.
- ⁵⁴J. W. Winfield, 'Counselling: an application', WAIT *Gazette*, vol. 3, no. 7, Sept. 1970, pp. 14-15.
- ⁵⁵J. H. Lord, director of Geological Survey of WA, 25 June 1979; Williams to Premier C. Court, 15 May 1979, Dept of Premier and Cabinet file 306/74; Management Board, 21 Apr. 1970, 2 Feb., 27 Apr. 1971; WAIT Council, 19 May 1971.
- ⁵⁶WAIT *Gazette*, vol. 7, no. 1, Mar. 1974, p. 37; vol. 8, no. 6, Sept. 1975, pp. 14-15.
- ⁵⁷M. Liveris, paper for Academic Board, 1 May 1973, for meeting, 22 June 1973.
- ⁵⁸Peters to heads of departments, 11 July 1967; meeting, 14 Aug. 1967, WAIT file S4006-1.
- ⁵⁹Peters to Dufty, Robertson, S. T. Waddell, 15 Nov. 1967, WAIT file S4006-1.
- ⁶⁰Minister for education to Williams, 13 Aug. 1968; minister for education to Crown Law Dept, 6 Nov. 1968, WAIT file S4006-1; Interim Council, 16 Oct. 1968.

- ⁶¹Peters to Interim Council, 12 Dec. 1968, WAIT file S4006-2.
- ⁶²T. Silvan, report, 3 Feb. 1969, WAIT file S4006-2; also interview, 1988.
- ⁶³Black to Robertson, 16 Feb. 1968, WAIT file G3005.
- ⁶⁴Management Board, 28 Feb., 10 July 1968.
- ⁶⁵Records of the Karina Club in Curtin University archives; WAIT *Gazette*, vol. 1, no. 6, Nov. 1968, p. 10.
- ⁶⁶WAIT *Gazette*, vol. 1, no. 4, Sept. 1968, pp. 8-9.
- ⁶⁷WAIT *Gazette*, vol. 2, no. 1, Feb. 1969, p. 10.
- ⁶⁸WAIT *Gazette*, vol. 3, no. 7, Sept. 1970, p. 13.
- ⁶⁹Address to staff by Williams, 21 Feb. 1972.
- ⁷⁰J. S. Finney, *Planning for Uncertainty. A Case Study*—WAIT, ANU Centre for Continuing Education, Canberra, 1973, pp. 21-2.
- ⁷¹WAIT *Gazette*, vol. 4, no. 4, 1971, pp. 2-3.
- ⁷²WAIT *Gazette*, vol. 3, no. 10, Dec. 1970, p. 6; vol. 5, no. 3, May 1972, p. 3.
- ⁷³Planning and Resources Board, 2 Oct., 24 Oct. 1972; WAIT *Gazette*, vol. 6, no. 2, Mar. 1973, p. 19; Peters, report to Planning and Resources Board, 5 May 1973; Student Guild report, 1974.
- ⁷⁴B. Doolan; transcript of interview with E. R. Underwood, WAIT-EX tapes; *Gaz*, vol. 3, no. 3, June 1975, p. 1; vol. 3, no. 7, Nov./Dec. 1975, p. 1.
- ⁷⁵Committee of staff and students, 12 June 1968, WAIT file S4006-2.
- ⁷⁶Interim Council, 18 Dec. 1968; WAIT Council, 17 Sept. 1969.
- ⁷⁷WAIT Council, 10 Dec. 1971 (extraordinary meeting).
- ⁷⁸*Aspect*, Oct. 1971; Management Board, 27 Feb. 1972.
- ⁷⁹Management Board, 19 Dec. 1972; WAIT Council, 20 Dec. 1972.
- ⁸⁰Interview with W. Thomas, 1988; WAIT Council, 18 Sept. 1974; interview with D. Zink, 1988.
- ⁸¹WAIT Council, 24 Nov. 1974.
- ⁸²D. F. Cummings to Williams, 30 June 1970, WAIT file S4002-1.
- ⁸³WA, Parliament, *Debates*, vol. 217, no. 3, 25 Oct. 1977, p. 2552.
- ⁸⁴WAIT Council, 7 Nov. 1977.
- ⁸⁵Interview with K. Gibbons, 1988; Guild Council, *Annual Report 1979*; *Grok*, vol. 12, no. 5, June 1979.
- ⁸⁶Guild Council, *op. cit.*
- ⁸⁷WAIT *Gazette*, vol. 3, no. 4, 1975.
- ⁸⁸Guild Council, *op. cit.*
- ⁸⁹*Grok*, vol. 14, no. 9, Oct. 1981.
- ⁹⁰Guild Council, *Annual Report 1984*; *Grok*, vol. 7, no. 1, Feb. 1984; vol. 8, no. 4, May 1985.
- ⁹¹Interview with R. Coffey, 1988.
- ⁹²Student associations in tertiary education, in WAIT file G3041-6.
- ⁹³D. W. Watts to W. L. Grayden, 31 July 1981, WAIT file G3041-6.
- ⁹⁴Interviews with Yacopetti, Gibbons, R. Duncanson, S. Wakeham, conducted by Terry Craig in 1989.
- ⁹⁵Guild Council, 6 July 1981.
- ⁹⁶WA, Parliament, *Debates*, vol. 243, no. 2, 1983-4, 23 Aug. 1983, pp. 1599 ff.
- ⁹⁷Interviews with guild presidents conducted by Craig.
- ⁹⁸Guild Council, 22 Feb. 1983.
- ⁹⁹Guild Council, 1 May 1984.
- ¹⁰⁰Cummings to Williams, *op. cit.*
- ¹⁰¹Correspondence in WAIT file B5104-1; project planning committee, 1 May 1969.
- ¹⁰²J. McCusker, CACAE, to Williams, 28 Oct. 1969; G. Brown to Peters, 26 May 1971, WAIT file B5104-2.
- ¹⁰³D. Cox to Williams, 15 Oct. 1971, WAIT file S4002-1; interviews with Nash and H. Girvan-Brown.
- ¹⁰⁴Cox to Premier J. Tonkin, 7 June 1972, WAIT file S4002-1.
- ¹⁰⁵WAIT, *Annual Report 1978*, p.8.
- ¹⁰⁶Guild Council, 28 May 1973; M. A. Cunningham to L. Fricker, CACAE, 13 July 1974, WAIT file B5181-1.
- ¹⁰⁷Williams to Fricker, 28 Mar. 1974, WAIT file B5181-1.
- ¹⁰⁸F. Dawson and Ward to Finney, 24 Oct. 1974, WAIT file B5181-1.
- ¹⁰⁹WAIT Council, 17 May 1978.
- ¹¹⁰Guild Council, *Annual Report 1977*, p. 10.
- ¹¹¹Guild Council, 1 Dec. 1976; *Sunday Times*, 6 Mar. 1977.
- ¹¹²Court to under-secretary, Dept of Premier and Cabinet, 10 Mar. 1977; Williams to Court, 17 Mar. 1977; Court to Williams, 21 Mar. 1977, Dept of Premier and Cabinet file 306/74; Guild Council, 2 Mar. 1977.
- ¹¹³WAIT, *Annual Report 1977*, pp. 9, 18; *The Reporter*, vol. 1, no. 3, WAIT, Apr. 1978; WAIT housing officer, annual report, 1978, p. 1.
- ¹¹⁴Finance and staffing committee, 10 Dec. 1979; student housing officer, annual report, 1979; inaugural meeting of WAIT intercampus tenants exchange programmes, 28 Mar. 1980; also Finney to Girvan-Brown, 20 May 1980, Rotary House: collected minutes and correspondence.
- ¹¹⁵Silvan to Williams, 9 Jan. 1970, WAIT file S4028.
- ¹¹⁶*Gaz*, vol. 2, no. 5, July 1974, p. 2; vol. 3, no. 1, Mar. 1975, p. 2.
- ¹¹⁷Alumni Board, 28 May 1973, WAIT file S4028.

Chapter 5

- ¹For readers interested, a detailed description of development in the Perth Technical College may be followed in M. A. White, *The specific and interrelated tasks of institutions of tertiary education in WA*, PhD thesis, UWA, 1968.

- ²E. W. Shilbury's personal papers, in Curtin University archives.
- ³See Education Dept file 1830/51.
- ⁴Unless specifically noted otherwise, information for the remainder of this chapter has been gleaned from the internal annual reports of the WAIT departments, which were published annually in bound copies.
- ⁵Finance and staffing committee, 7 Aug. 1967.
- ⁶WAIT *Gazette*, vol. 3, no. 1, Mar. 1970, p. 5 (Foley); vol. 4, no. 1, Feb. 1971, p. 5 (Graebner).
- ⁷Planning and Resources Board, 20 Mar. 1973.
- ⁸Under-secretary, Dept of Public Health, to minister for health, 21 May 1970, and subsequent correspondence in Treasury Dept file 80/7011, C61.
- ⁹Wark papers (I. Wark), Australian Academy of Science, ASAP 7/29, minutes of meetings of the CACAE, 23-4 Apr. 1966, report of visit to WA; see also J. de Lacter, 'Applied physics in the Western Australian Institute of Technology', *The Australian Physicist*, vol. 6, 1969, pp. 143-8.
- ¹⁰WAIT *Gazette*, vol. 4, no. 4, Aug. 1971, pp. 2-3.
- ¹¹WAIT *Gazette*, vol. 6, no. 4, May/June 1973, pp. 8-10; 'Batavia expedition', WAIT *Gazette*, vol. 7, no. 2, Apr. 1974, pp. 2-4; vol. 7, no. 3, June 1974, pp. 14, 24.
- ¹²WAIT, *Proceedings of the First National Conference on Physics in Australian Colleges of Advanced Education*, WAIT, 28 Aug.-1 Sept. 1972.
- ¹³Interview with R. Hartley, and career statement, 1988.
- ¹⁴A situation confirmed from a reading of internal departmental reports for the period and from interviews with W. L. A. Munro, A. G. Cook and A. H. Nash.
- ¹⁵WAIT *Gazette*, vol. 3, no. 2, Apr. 1970, p. 5.
- ¹⁶See WATEC, *Annual Report—1971*, Perth, 1971, pp. 49-50.
- ¹⁷Year of Review meeting, 5 July 1971.
- ¹⁸Year of Review meeting, 25 Mar. 1971.
- ¹⁹Year of Review meeting, 30 Mar. 1971.
- ²⁰WAIT *Gazette*, vol. 6, no. 1, Feb. 1973, pp. 2-3; vol. 8, no. 8, Nov. 1975, p. 13.
- ²¹See D. H. Simpson to H. S. Williams, 25 Mar. 1969, WAIT file 1036-2.
- ²²WAIT *Gazette*, vol. 1, no. 1, June 1968, p. 6; vol. 3, no. 1, Mar. 1970, p. 7.
- ²³Year of Review meeting, 23 June 1971.
- ²⁴Interview with A. K. Russell, 1988.
- ²⁵WAIT *Gazette*, vol. 1, no. 4, Sept. 1968, pp. 6-7; vol. 2, no. 1, Feb. 1969, p. 10; vol. 6, no. 1, Feb. 1973, pp. 7-9; vol. 6, no. 2, Mar. 1973, pp. 22-3; vol. 6, no. 3, Apr. 1973, pp. 16-17.
- ²⁶WAIT *Gazette*, vol. 6, no. 1, Feb. 1973.
- ²⁷The bitter conflict is described in D. Ladbrook and N. Kunne, 'The evolution of social work at the WAIT 1967-1986, (unpublished paper) n.d.
- ²⁸Interview with E. J. Callander, 1988.
- ²⁹WAIT *Gazette*, vol. 3, no. 9, Nov. 1970, pp. 10-11.
- ³⁰Interview with M. Liveris, 1988; also Liveris, 'Health sciences', WAIT *Gazette*, vol. 5, no. 9, Dec. 1972, pp. 14-17.
- ³¹WATEC, *op. cit.*, pp. 28-9; R. A. Coombe to B. Lyons, NSW Nurses' Registration Board, 4 June 1969, WAIT file E2108-1.
- ³²Chairperson, Nurses' Board, to Williams, 2 June 1971, WAIT file E2108-1; Le Souef to Minister for Health R. Davies, 7 Mar., 19 Apr. 1973, Dept of Public Health file 170/73; also H. R. Smith to Williams, 18 June 1973, and reply, WAIT file E2108-1.
- ³³M. E. Parkes to Williams, 21 June 1973; P. Sinclair to Williams, 13 Apr. 1973, WAIT file 2108-1; WAIT Council, 20 Nov. 1974.
- ³⁴*Tertiary Education in Western Australia* (Jackson Report), Govt Pr., Perth, 1967, pp. 42-3; M. Sadka, 'Acquired speech and language disorders in the adult—an historical perspective, paper given at the Australian Association of Speech and Hearing Conference, Perth, 12 Apr. 1989; also interview with A. Zubrick.
- ³⁵Interview with D. Zink, 1988.
- ³⁶C. Sanders to Williams, 22 Apr. 1971; Williams, 10 May 1971, WAIT file E2135.
- ³⁷WATEC, *Annual Report—1973*, Perth, 1973, p. 7.
- ³⁸Williams, 'Music at WAIT', *Education News*, vol. 14, no. 12, Dec. 1974, pp. 13-15.
- ³⁹Jackson Report, *op. cit.*, pp. 44-7.
- ⁴⁰See Education Dept file 2091/66; WATEC, *Annual Report—1971*, Perth, 1971, pp. 14-15.
- ⁴¹*ibid.*
- ⁴²Inaugural meeting of board of study, 17 Feb. 1970.
- ⁴³See J. Miles, 'Control of kindergarten teacher education in WA 1913-73, MEd thesis, UWA, 1978; WAIT Council, 18 Apr., special app., 19 Dec. 1973.
- ⁴⁴Interview with W. D. Neal, 1989.

Chapter 6

- ¹For a detailed description of the history of the School of Mines, see M. A. White, 'A history of the School of Mines of Western Australia (unpublished MS); also *The Community and Post-School Education in Western Australia*, Technical Publications Trust, Perth, 1981.
- ²R. A. Hobson, submission to the CACAE (Wark), Treasury Dept file 65/66.
- ³Correspondence between I. Wark and L. Brodie-Hall, viewed while conducting an interview with Brodie-Hall in 1988.
- ⁴White, 'Agricultural education in Western Australia: historical perspectives', *A.C.T. TAFE Papers*, 1987; also see P. Maskell, 'History of Muresk Agricultural College, MA thesis, University of New England, 1976.

- ⁵*Agricultural Education in Western Australia* (Stern Report), Govt Pr., Perth, 1971.
- ⁶White, *The Community and Post-School Education in Western Australia*, *op. cit.*
- ⁷Material drawn from Dept of Public Health files 845/62, 5711/65, 70/65.
- ⁸Royal Perth Hospital, *Report of Board of Management for 1955*, pp. 15, 24–5; *Report for 1960*, p. 28; also see O. Rayne, 'New school of occupational therapy at the Royal Perth Hospital', *Royal Perth Hospital Journal*, June 1961.
- ⁹'Reflections on the history of the Shenton Park Annex', *Royal Perth Hospital Journal*, Sept. 1965; record of meeting in Dept of Public Health file 5711/65.
- ¹⁰Govt of WA, *Submission to the Commonwealth Advisory Committee on Advanced Education*, WAIT, Perth, 1968, part 5; G. Bedbrook to under-secretary, Dept of Public Health, 14 Sept. 1965, Dept of Public Health file 5711/65.
- ¹¹Correspondence dated 8 Dec. 1967, Dept of Public Health file 5711/65.
- ¹²Dept of Public Health file 911/45.
- ¹³For a good description see P. V. Slater, submission to Committee on Tertiary Education in WA (Jackson), Apr. 1967, Medical Dept file 6006/66.
- ¹⁴D. K. Bartels to Minister for Agriculture C. D. Nalder, Cabinet minute, 6 May 1968, Treasury Dept file 70/65.
- ¹⁵Minister for Health G. C. MacKinnon, to Cabinet, 6 May 1968, Treasury Dept file 70/65.
- ¹⁶Minister for Mines A. Griffith, to premier, 23 Apr. 1968, Treasury Dept file 65/66.
- ¹⁷Interview with Brodie-Hall, 1988.
- ¹⁸H. W. Peters to H. S. Williams, 10 June 1968, Treasury Dept file 70/65.
- ¹⁹Premier to minister for education, 22 Aug. 1968, Treasury Dept file 70/65.
- ²⁰T. L. Robertson to minister for education, 28 Oct. 1968, WAIT file A1069–1; Interim Council, 18 Dec. 1968.
- ²¹L. M. Croy to Peters, 24 Oct. 1968; P. Yacopetti to Peters, 20–2 Nov. 1968, WAIT file A1069–1.
- ²²R. A. Coombe to Williams, 30 May 1968; Coombe to Bartels, 22 Oct., 11 Nov. 1968; Yacopetti to Peters, 19 Nov. 1968, WAIT file A1068–1.
- ²³R. H. Henderson to M. Liveris, 19 Sept. 1969, Dept of Public Health file 5170/69; WAIT Council, 19 Feb. 1969, pp. 2, 9–10. Coombe apparently refused to grant to medical practitioners the title 'doctor' because they did not hold a PhD!
- ²⁴Peters to J. D. Collister, 20 Dec. 1968; Coombe to Williams, 3 June 1969, WAIT file 1069–1.
- ²⁵Interview with A. V. Pegler, 1989.
- ²⁶Maskell, *op. cit.*
- ²⁷A. J. Gilbert's *curriculum vitae* in WAIT personal file; interview with L. Twomey, 1988.
- ²⁸Peters to Collister, 20 Dec. 1968, WAIT file 1069–2; WAIT Council, 18 June 1969.
- ²⁹Internal annual reports (therapy), dating from 1969. Gilbert himself kept personal files reporting on developments, which are held in the School of Therapy.
- ³⁰Press release, 26 Feb. 1969, WAIT file 1069–2.
- ³¹Address by Coombe to the AGM of the Institute of Agriculture, UWA, 28 Mar. 1969.
- ³²Interview with Twomey, 1988.
- ³³Internal annual reports (therapy), 1971, 1972.
- ³⁴Report of review committee, 28 May 1970, WAIT file A1608–3. Professor G. L. McClymont was invited from the University of New England to assist with advice.
- ³⁵WAIT *Gazette*, vol. 5, no. 1, Mar. 1972, p. 7; interview with Brodie-Hall, 1988.
- ³⁶Report of subcommittee on metallurgy course, 28 Apr. 1972; Pegler to Williams, 7 July 1971; special meeting of area board, 10 Oct. 1973, app., WAIT file A1069–6.
- ³⁷Address by Pegler to executive committee of the WA Chamber of Mines, in a collection of personal papers.
- ³⁸Meeting with K. Townsing, 28 Apr. 1971, in Wark papers (I. Wark), Australian Academy of Science, ASAP acc. 6/6/85, diary notes 6/6: 27/6/69 – 5/11/71.
- ³⁹Academic Board, 23 Nov. 1973.
- ⁴⁰*Kalgoorlie Miner*, 25 Jan., 30 Jan., 14 Mar. 1974, WAIT file A1608–8.
- ⁴¹Brodie-Hall statement, 26 Apr. 1974, WAIT file A1608–8.
- ⁴²*The West Australian*, 26 Apr. 1974; WAIT, submission to the Commonwealth Commission on Advanced Education for the fourth triennium 1976/78, part 4, WAIT, 1975.
- ⁴³WAIT, *Annual Report 1974*, p. 15.
- ⁴⁴Interview with I. O. Jones, 1989.
- ⁴⁵Review committee meeting, 25 May 1970, WAIT file A1608–3.
- ⁴⁶Internal annual report (Muresk Agricultural College), 1979.
- ⁴⁷*ibid.*
- ⁴⁸Information from relevant internal annual reports.
- ⁴⁹Sec Commonwealth Commission on Advanced Education, *Report for the Fourth Triennium 1976/78*, AGPS, Canberra, 1975; also WA Chamber of Mines, submission to Committee on Post-Secondary Education (Partridge), 1976.
- ⁵⁰Interview with P. V. Jones, then a government minister; see also School of Mines, *75 Years—WA School of Mines*, WAIT, Perth, 1977.
- ⁵¹Academic Board, 4 June 1976; education and general purposes committee, 14 July 1976; WAIT Council, 21 July 1976; reversal in WAIT Council, 20 Apr. 1977.

- ⁵²Combined meeting of Academic Board and Planning and Resources Board, 3 June 1977; education and general purposes committee, 7 June 1977; finance and staffing committee, 13 June 1977; WAIT Council, 22 June, 20 July 1977.
- ⁵³WAPSEC, *Report on the Future of Tertiary Education in the Eastern Goldfields*, WAPSEC, Perth, 1977; I. O. Jones to Williams, 6 Oct. 1977; WAIT Council, 19 Oct. 1977; WAPSEC, *Annual Report for 1978*, p. 28.
- ⁵⁴WAIT Council, 20 Dec. 1978; record of meeting, 14 Feb. 1979, WAIT file 1069-12.
- ⁵⁵Jones to Williams, 11 Sept. 1979, WAIT file 1069-12; Planning and Resources Board, 2 Oct. 1979; WAIT Council, 19 Dec. 1979.
- ⁵⁶Planning and Resources Board, 19 Feb. 1980.
- ⁵⁷Correspondence and reports in WAIT file 1069-12; Planning and Resources Board, 20 Mar. 1979.
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- ¹Interview with K. Hall, 1989.
- ²Interviews with D. Holroyde, 1989.
- ³Interview with L. Hegvold, 1989.
- ⁴Interview with J. Dolin, 1989.
- ⁵With respect to the School of Applied Science and the other schools examined in the present chapter, most of the information has been gleaned from WAIT's internal annual reports of departments. Only where particularly interesting developments are mentioned are these noted specifically.
- ⁶A. H. Nash, *Engineering education for a changing world*, paper delivered at Annual Engineering Congress, Institution of Engineers (Australia), Townsville, 1976.
- ⁷Planning and Resources Board, report of the working party of the School of Engineering and Surveying, 3 Aug. 1980.
- ⁸*The Reporter*, vol. 3, no. 20, WAIT, 12 Dec. 1980.
- ⁹M. Liveris, *Trends in health science education—study leave report*, WAIT, 1975.
- ¹⁰WAIT Council, 18 Apr. 1979.
- ¹¹H. S. Williams to W. D. Neal, WAPSEC, 17 Feb. 1977, WAIT file E2183.
- ¹²Record of discussions with P. Karmel, Mar. 1977, WAIT file E2183; Williams to Neal, 3 June 1977; L. P. Fricker, *Advanced Education Council*, to W. J. House, 4 Oct. 1977, WAIT file 1208-3.
- ¹³Academic Board, 3 Mar. 1978.
- ¹⁴*The Australian*, 30 Nov. 1977, and correspondence in WAIT file E2108-4. A good description of events is in M. E. Parkes, 'Introduction of college-based nursing programme', *Australian Nurses Journal*, vol. 8, no. 9, Apr. 1979, pp. 36-40.
- ¹⁵Williams to M. E. Patten, RANF, 28 Mar. 1979, WAIT file E1208-4.
- ¹⁶S. Harlow to A. J. Lonsdale, 15 June 1981, WAIT file E1208-4.
- ¹⁷*The Reporter*, vol. 1, no. 1, WAIT, 17 Mar. 1978; vol. 3, no. 5, 2 May 1980.
- ¹⁸Planning and Resources Board, 8 Aug. 1978.
- ¹⁹WAIT Council, 18 Apr. 1979.
- ²⁰Internal annual reports, 1975, pp. 83-7.
- ²¹D. Zink to Planning and Resources Board, 29 Apr. 1974; see Planning and Resources Board, 23 Apr. 1974.
- ²²Planning and Resources Board, 28 July, 8 Aug. 1978; WAIT Council, 20 Sept. 1978.
- ²³WAIT Council, 17 May 1978; *The Reporter*, vol. 1, no. 12, WAIT, 18 Aug. 1978; vol. 1, no. 20, 8 Dec. 1978.
- ²⁴WAIT *Gazette*, vol. 10, no. 3, Sept. 1977, pp. 22-4.
- ²⁵Music studies at the institute, 23 June 1977, WAIT file E2135-2; WAPSEC, *Annual Report for 1977*, p. 20; WAPSEC, *Education for the Performing Arts—A Review of Post-Secondary Education Needs in Western Australia*, WAPSEC, 1978.
- ²⁶WAPSEC, *Annual Report for 1979*, p. 12.
- ²⁷WAPSEC, *Art, Craft and Design Education: A Study of the Opportunities in the Post-Secondary Sector in Western Australia*, WAPSEC, Perth, 1979.
- ²⁸Holroyde, discussion paper in Planning and Resources Board, 8 Aug. 1978.
- ²⁹Interviews with Neal, 1989.
- ³⁰WAPSEC, *Annual Report for 1980*, pp. 18-19.
- ³¹Neal interview, *op. cit.*
- ³²From an unpublished paper by G. Allen, principal librarian, Curtin University.
- ³³WAIT, submission to the Committee of Inquiry into the Future of Murdoch University (Birt), WAIT, 1979.
- ³⁴Planning and Resources Board, 7 Mar. 1978.
- ³⁵Planning and Resources Board, 12 Sept. 1978.
- ³⁶The early correspondence leading to the establishment of the WAMPRI is in Dept of Premier and Cabinet file 306/74, and in particular W. A. Pullman to Premier C. Court, 14 June 1978.
- ³⁷Williams to Court, 15 May 1979; other correspondence dated 17 May and 25 June 1979; and J. H. Lord, 25 June 1979, Dept of Premier and Cabinet file 306/74.
- ³⁸J. de Lacter, *Study leave report*, WAIT, 1978, p. 15.
- ³⁹WAIT, submission to the Birt committee, *op. cit.*, pp. 18-19.
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- ¹Address to staff by H. S. Williams, Feb. 1975, pp. 8-9.
- ²Address to staff by Williams, Feb. 1976, p. 4.
- ³WATEC, *Annual Report—1975*, Perth, 1975; see also interview with G. C. MacKinnon, 1989.
- ⁴WAIT Council, 25 Oct. 1975, 18 Feb., 21 Apr. 1976; interview with A. Barblett, 1989.
- ⁵WAIT Council, 21 Apr. 1976.

- ⁶WAIT Council, 16 Feb., 16 Mar., 20 Apr., 22 June 1977.
- ⁷WAIT Council, 20 Nov. 1974, 21 July, 15 Sept. 1976, special app.; Barlett interview, *op. cit.*
- ⁸Planning and Resources Board, 17 Oct. 1975, special meeting; 2 Dec. 1975.
- ⁹Planning and Resources Board, 21 Oct. 1976.
- ¹⁰Planning and Resources Board, 18 July, 8 Aug. 1978.
- ¹¹Planning and Resources Board, 6 Feb. 1979; interview with A. V. Pegler, 1988.
- ¹²Planning and Resources Board, 18 July 1978, architect's report.
- ¹³W. A. Pullman to WAPSEC, 17 July 1978; Planning and Resources Board, 18 July 1978.
- ¹⁴WAIT, *Statistical Indicators*, Perth, 1979.
- ¹⁵Committee on Post-Secondary Education (Partridge), *Post-Secondary Education in Western Australia* (Partridge Report), Govt Pr., Perth, 1976, especially ch. 2, pp. 137-8.
- ¹⁶*ibid.*, p. 139.
- ¹⁷*ibid.*, p. 157.
- ¹⁸Address to staff by Williams, Feb. 1976.
- ¹⁹*ibid.*
- ²⁰WAIT, Response to the Partridge Report, WAIT, Perth, 1976.
- ²¹WAIT Council, 19 May 1976; WA, Parliament, *Debates*, vol. 212, no. 2, 13 May 1976, pp. 1001-3; 20 May 1976, pp. 1179-86; interview with W. D. Neal, 1989.
- ²²WAIT's deans to Premier C. Court, 21 Dec. 1976, WAIT file A1255.
- ²³WAIT Council, 16 Apr. 1975.
- ²⁴WAIT Council, 18 Sept. 1974; 16 Oct. 1974; 16 Apr. 1975.
- ²⁵Address to staff by Williams, Feb. 1973.
- ²⁶WAIT *Gazette*, vol. 6, no. 5, July 1973, pp. 3-5.
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Chapter 12

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- ⁶Interviews with D. W. Watts, 1987, 1989.
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- ⁸Interview with Pearce, *op. cit.*
- ⁹Pearce to W. A. Pullman, 10 Aug. 1984; *The Australian*, Higher Education Supplement, 12 Sept. 1984.
- ¹⁰*The West Australian*, 10 Sept. 1984.
- ¹¹*The West Australian*, 11 Sept. 1984; *The Australian*, Higher Education Supplement, 12 Sept. 1984.
- ¹²The future status of WAIT, Oct. 1984, attachment to WAIT Council minutes, 19 Sept., 19 Nov. 1984.
- ¹³WA, Parliament, *Debates*, 11 Oct. 1984, pp. 2298–304.
- ¹⁴Interview with Pullman, 1989. I was also able to obtain privileged access to WAPSEC files on the university status issue.
- ¹⁵Meeting of director and associate directors, 10 Apr., 24 Apr. 1985; WAIT Council, 29 May 1985.
- ¹⁶WA, Parliament, *Debates*, 27 Nov. 1986, p. 5005.
- ¹⁷Interview with Hall, *op. cit.*
- ¹⁸Academic Board, 21 Sept. 1984: education and general policy committee, 16 Sept. 1985; WAIT Council, 25 Sept. 1985.
- ¹⁹WAIT Council, 27 Nov. 1985; *The Australian*, Higher Education Supplement, 29 Jan. 1986.
- ²⁰*The Australian*, Higher Education Supplement, 8 Jan. 1986.
- ²¹*The West Australian*, 7 Dec. 1984; WAIT Council, 28 Aug., 27 Nov. 1985.
- ²²Interviews with B. Easton, D. Hatt and Dr. E. Harman.
- ²³*The West Australian*, 14 Oct. 1985.
- ²⁴WAPSEC, 6 Nov. 1985.
- ²⁵*The Australian*, Higher Education Supplement, 11 Sept., 18 Sept. 1985.
- ²⁶*The Australian*, Higher Education Supplement, 29 May, 21 Aug. 1985.
- ²⁷Watts to H. R. Hudson, 3 Sept. 1985, WAIT file A1278–6.

²⁸*The Australian*, Higher Education Supplement, 12 Mar. 1986.

²⁹Easton to vice-chancellor, Murdoch University, 4 Feb. 1986, WAIT file—Yanchep campus. For newspaper comment, see *The Australian*, Higher Education Supplement, 1 Jan., 26 Feb. 1986.

³⁰WAIT Council, 30 Apr. 1986.

³¹WAIT, *A University Campus at Yanchep: A Proposal by the Western Australian Institute of Technology to Yanchep Sun City Pty Ltd, for Development of a University Campus at Yanchep*, WAIT, June 1986; other correspondence in WAIT file—Yanchep campus.

³²Interview with Pearce, *op. cit.*, corroborated by Watts and J. Sharpham.

³³Australian College of Education, WA Chapter, *Newsletter*, vol. 22, no. 3, July 1986, WAIT file 1327.

³⁴Interviews with P. Yacopetti, corroborated by P. de Young and Watts.

³⁵*The Australian*, Higher Education Supplement, 26 Feb. 1986.

³⁶*The Australian*, Higher Education Supplement, 21 May, 11 June 1986.

³⁷Interview with Pearce, *op. cit.*

³⁸*The Australian*, Higher Education Supplement, 28 May 1986.

³⁹P. Porter, WACAE, to Pearce, 6 June 1986, and to other politicians, WAPSEC file 60:06–2.

⁴⁰Student Guild, WACAE, to Pullman, 2 July 1986, WAPSEC file 60:06–2.

⁴¹*The West Australian*, 9 July 1986; WAPSEC, 26 May, 9 June 1986.

⁴²Pullman to Pearce, 9 June 1986, WAPSEC file 60:06–1; and also from interview with Pullman, *op. cit.*

⁴³Correspondence in WAIT file—Yanchep campus.

⁴⁴*The Australian*, Higher Education Supplement, 21 May, 4 June 1986; interview with N. Moore, 1989; and interviews with Watts and Sharpham, *op. cit.*

⁴⁵*The Australian*, Higher Education Supplement, 28 May 1986.

⁴⁶*ibid.*

⁴⁷Reported in *The West Australian*, 8 Aug. 1986; see *The Reporter*, vol. 9, no. 7, WAIT, Aug. 1986.

⁴⁸B. Smith to Commonwealth Minister for Education S. Ryan, 1 Sept. 1986, WAPSEC file 60:06–2.

⁴⁹Interview with Student Guild president, James Best.

⁵⁰*The Australian*, Higher Education Supplement, 3 Sept. 1986.

⁵¹C. Barnett, president of SAIT Council to the premier of South Australia, 25 Sept. 1986, WAPSEC file 60:06–B.

⁵²Correspondence in WAIT file 1327.

⁵³*The West Australian*, 5 July 1986; also from interviews with Watts and Pearce, *op. cit.*

⁵⁴*The Australian*, Higher Education Supplement, 9 July 1986; *The West Australian*, 9 July 1986.

- ⁵⁵Interview with Pearce, *op. cit.*
- ⁵⁶State Cabinet, submission, 11 July 1986, WAPSEC file 60:06-2.
- ⁵⁷Interview with Pearce, *op. cit.*
- ⁵⁸*The Australian*, Higher Education Supplement, 11 June 1986. This statement caused a stir on the WAIT campus, quite apart from generating a good deal of media comment.
- ⁵⁹Interview with Pullman, *op. cit.*
- ⁶⁰Under-treasurer to Pullman, 21 Oct. 1986; Pearce to premier in State Cabinet, 24 Oct. 1986, WAPSEC file 60:06-2.
- ⁶¹WAPSEC, 3 Dec. 1986.
- ⁶²WA, Parliament, *Debates*, vol. 262, no. 4, 18 Nov. 1986, pp. 4341 ff.; 3 Dec., p. 5362; also interview with Moore, *op. cit.*
- ⁶³WA, Parliament, *Debates*, vol. 262, no. 4, 19 Nov. 1986; Watts to Pearce, 8 Dec. 1986, WAPSEC file 60:006-C.
- ⁶⁴WAIT Council, 28 May, 25 June 1986.
- ⁶⁵WAIT Council, 26 Nov. 1986.
- ⁶⁶WAIT Council, 17 Dec. 1986.
- ⁶⁷*The Australian*, Higher Education Supplement, 24 June 1987.
- ⁶⁸A great deal of relevant material was drawn together for the Australian Vice-Chancellors' Committee visitations late in the year. This was seen as the test-case for other institutes later seeking similar standing. Arising out of the WAIT assessments, the Australian Vice-Chancellors' Committee prepared an official statement providing guidelines regarding what characteristics should be demonstrated in institutions seeking entry to its membership.
- ⁶⁹The situation in Australia during the two years of upheaval is neatly summarised in S. Davics, *The Martin Committee and the Binary Policy of Higher Education in Australia*, Ashwood Press, Sydney, 1989, postscript.
- ⁷⁰W(h)ither Binary? Seminar on the Organisation of Higher Education in the 21st Century, WAPSEC, Perth, 1987.
- ⁷¹From WAPSEC file 60:06-2.
- ⁷²Committee of Review of Higher Education in Western Australia, *Report*, Govt Pr., Perth, 1989.
- ⁷³Academic Board, 7 Aug., 27 Nov. 1987; 27 May 1988.
- ⁷⁴Academic Board, 30 Sept. 1987.

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