4.0 Introduction

4.1 Overview of the project

It is proposed to construct a new private hospital, in two stages, on a site (referred to as Site 2) in Macquarie University Research Park, North Ryde, to establish a major medical precinct to complement the teaching services offered by Macquarie University adjacent. It will be linked via an elevated enclosed bridge to another building (yet to be constructed LDA 676/2001) referred to as the Specialist Centre, on a site (referred to as Site 1) to the north of Technology Place. The Specialist Centre will house consulting spaces as well as University research and teaching spaces associated with allied health services taught at the University.

Project Approval is sought under Part 3A of the EP&A Act 1979 for the following elements of the development:

- maintaining existing development rights on Site 1 (LDA 676/2001) which has attained physical commencement and has paid Section 94 contribution to Ryde Council
- Declaration that Site 1 can now be considered as Part 3A application.
- Demolition of all buildings and structures on Site 2;
- Staged construction of a 6 storey private hospital on Site 2 including associated site, landscaping and infrastructure works and a pedestrian bridge across Technology Place (connecting to Site 1);
- Amendments to the basement, internal layout and facade of the Site 1 building approved under LDA 676/2001; and
- Use of the Site 1 building as specialist consulting rooms and the like in conjunction of the private hospital.

The initial stage of construction will include: -

- Construction of a new 5 storey building above ground and one level of basement car park;
- 144 bed private hospital beds including associated support functions
- Retail shops, a coffee shop, medical imaging services area and physiotherapy/hydrotherapy on ground level;
- Loading dock area for deliveries and ambulance access

Future expansion of the private hospital including-

- the expansion of operating theatres on Level 1, which will occur over the current loading dock to the south west of the site
- Additional 5 patient bed bays to recovery on Level 1, east side
- An additional floor comprising 64 private hospital beds

The project is being undertaken by Macquarie University Private Hospital a joint venture between Dalcross Hospital and Macquarie University. Building works will be undertaken by Baulderstone Hornibrook. The capital investment is approximately $70 million.

4.2 Background to the project

4.2.1 Dalcross Private Hospital

Dalcross Private Hospital, was established in the Sydney Upper North Shore suburb of Killara in 1912, and has established an excellent reputation as a premier private hospital in Australia, specialising in neurosurgery, spinal surgery, vascular surgery and ophthalmology.

The 60 bed Hospital is Australia's busiest neurosurgical Centre in the private sector with about 30% of the practising neurosurgeons in New South Wales undertaking the majority of their private surgery at Dalcross. The hospital is independently owned and operated with agreements with all the major health insurance organizations.

It is the only private hospital in Australia that regularly undertaken routinely interventional neuroradiology and cerebral vascular surgery. It is also an acute centre for retinal surgery in the private sector.

The hospital has reached capacity and in need of new, modern technology in a teaching and research friendly environment.

The establishment of the Macquarie University Private Hospital is an opportunity to develop Australia's first world class, private teaching hospital facility. It will be the first university based private hospital that will offer excellence in teaching, research and clinical practice, akin to facilities such as the Mayo Clinic in the USA.

4.2.2 Macquarie University

The Macquarie University campus, covering approximately 126 hectares, one third of the Macquarie Park Corridor at North Ryde, provides academic facilities for approximately 30,000 enrolled students.

Macquarie University began teaching in 1967 in Behavioural Sciences, Earth Sciences, Economic and Financial Studies, English, Historical, Philosophical and Political Studies, Mathematics and Physics, and Modern Languages.

Shortly after professional studies in technology, law, teacher education, actuarial studies and real estate management were added.

By the 1970s student interest had swung away from the sciences and towards the social sciences and humanities. At Macquarie, enrolments in Behavioural Sciences, Economic and Financial Studies, and Historical, Philosophical and Political Studies was booming, while those in the science schools were relatively static.

As Australia's 'Innovative University', Macquarie has developed excellence in its teaching and learning, research and community outreach endeavours. These endeavours are founded on consistent guiding principles that include:

- founded in the concept of serving the community
- delivering first-rate educational programs by a variety of modes (by face-to-face teaching in Sydney, and from strategically chosen locations in Asia, and by flexible, online and multi-mode learning in selected fields throughout Australia and the world
- distinguished by the conscious application of tested scholarly disciplines to modern needs
- driven intellectually by the enquiring spirit of fundamental research

- committed to the pursuit of flexible skills and a unity of knowledge that will fit the University to meet the complex demands of education in the 21st century; with a special commitment to postgraduate studies and research training
- innovative use of modern technologies to enhance academic outcomes and administrative processes.

The Macquarie Park corridor, with its high technology research-based industries, was created to emulate the model established by Stanford University in Silicon Valley, California, USA. It is therefore not surprising that the founders of Macquarie embedded within its enabling Act the requirement for Macquarie to be relevant to industry. With this statutory purpose in place, Macquarie University has become a key catalyst for the Macquarie Park technology corridor. Macquarie Park is now the pre-eminent technology precinct in Australia with major clusters representing IT, pharmaceutical and other technology-related industries of national and international standing.

4.3 Macquarie University SEPP Amendment and Project Application

On 22 December 2005, the Minister for Planning agreed to consider the inclusion of the Macquarie University Campus site as a 'state significant site' under Schedule 3 of the Major Projects SEPP.

On 4 April 2006, the Minister formed the opinion that the future, long term development of the Campus for a range of academic, commercial, research and accommodation uses should be declared a Major Project to which Part 3A of the EP&A Act applies.

A Planning Study has been prepared on behalf of the University to support the SEPP amendment and inclusion of the site under Schedule 3. The study was exhibited in September 2006. It seeks to make certain additional land uses permissible within the part of the Campus zoned 5(c) Special Uses, to identify an upper limit on the quantum of new development on the Campus, and to make the Minister the approval authority for all development on the Campus.

On 1 June 2006, the Director-General of the Department of Planning issued the environmental assessment requirements for the preparation of a Concept Plan Application for the Campus. The Project Application will set the long term vision for the Campus and establish a framework for the distribution of future uses and development proposals. At the time of writing, the Project Application was being prepared. It will incorporate the proposed private hospital development.

The proposed private hospital is currently permissible on the site and does not rely on the proposed SEPP amendment in any way. The proposed development, being a State Significant Project, supports the inclusion of the broader Macquarie University Campus as a state significant site under Schedule 3 of the Major Projects SEPP.

4.4 Existing Development Approval for Site 1

It is proposed to link the private hospital via an elevated enclosed bridge to another building (referred to as the Specialist centre) yet to be constructed, on a site (referred to as Site 1) to the north of Technology Place (LDA) 676/2001. This building will house consulting spaces as well as University research and teaching spaces associated with allied health services taught at the University.

Local Development Application (LDA) 676/2001 for Site 1 was approved by Ryde City Council on 1 November 2001. The development consent relates to the construction of a 5 storey 'research and development' office building with 250 basement car parking spaces and associated landscaping works on land known as No. 2 Technology Place or Site 1 (Lot 20 DP 1015626). In October 2006, a Construction Certificate was issued for works to physically commence under LDA 676/2001 thereby activating the consent. A Section 94 contribution, in the amount of $201,799, was paid to Council in order to release the Construction Certificate for works to commence.

Pursuant to Clause 75B(3) of the EP&A Act which states "if part of any development is a project to which this Part applies, the other parts of the development are taken to be a project to which this Part applies", it is proposed to include modifications to this approval within the Part 3A Project Application. In this way, a coordinated approach for both the Site 1 and Site 2 buildings is achieved.

The Site 1 building was approved under Ryde Planning Scheme 1979, prior to its amendment by Local Environmental Plan No 137. The differences in the key planning controls are:

Ryde Planning Scheme	**Local Environmental Plan No 137**
Zoning - Business Special (research and development 3(f)	Zoning - Business Special (Mixed Activity) 3(h)
Floor space ratio equivalent to 1:1	Floor space ratio of 1:1
No height limit	6 storeys
Setback 15m from Talavera Road	No setbacks
Off street parking 1 space/ 46m2	Off street parking of 1 space/ 80m2

In June 2005 the consent was modified under Section 96 of the EP&A Act 1979, to:

- regularise the north-eastern façade, altering it from a curved façade to a splayed and rectilinear façade, whilst maintaining a minimum setback of 15m from Talavera Road.
- minor modification to the southern and western façade
- reduction of the northern façade at Levels 1 to 4 by some 5.3m
- relocation of the plant rooms from each level to a combined roof top plant area
- consequential adjustments to the driveways, pedestrian walkways and parking to suit the above modifications

It is now proposed to make the following relatively minor internal and external modifications to the current approval in order to integrate the two buildings:

- the bridge link to the proposed hospital on Site 2
- an additional entry on ground floor from Technology Place
- changes to the parking on Basement 1 to link to the Basement 1 of the Private Hospital and provide additional underground parking on the eastern side adjacent Talavera Road, accessed from the hospital

These are modifications are shown in **Section 11.3**

4.5 Need and benefits of the Proposal

The existing 60 bed Dalcross Hospital at Killara is Australia's busiest neurosurgical centre in the private sector with about 30% of the practising neurosurgeons in New South Wales undertaking the majority of their private surgery at Dalcross. It is the only private hospital in Australia that regularly undertaken routinely interventional neuroradiology and cerebral vascular surgery.

The hospital has reached capacity and in need of new, modern technology in a teaching and research friendly environment.

Dalcross had previously explored other alternative locations including one in the centre of Chatswood, but these had been discounted when the opportunity for a location next to Macquarie University had arisen. These alternatives are discussed in more detail in **Section 6.1.**

The establishment of the Macquarie University Private Hospital is an opportunity to develop Australia's first world class, private teaching hospital facility. The proposed model of integrating a private hospital with a research intense university is one based upon best practice as established in such distinguished institutions as the Mayo Clinic, Rochester and Georgetown University Hospital.

The key objectives of the project can be summarized as follows:

- To establish Australia's first pre-eminent private teaching hospital on a university campus
- To establish an elite medical, teaching and research facility
- To establish new fee paying postgraduate medical programmes attracting a national and international client base
- To develop a medical research profile and to seriously compete for NHMRC and related ARC funding
- To attract high performing medical academics who share the vision for a world-class facility and bring with them research funding
- To provide a unique medical and research environment free from the strictures of established medical schools
- The establishment of a medical related foundation to enable private philanthropy and serve as a source of funds for teaching and research
- To create an alternative qualification program in partnership with the Royal Australian College of Surgeons, RACS
- The potential to attract Government funding for a new pathway to postgraduate medical qualifications.

The one key aspect of the Stanford model that has not yet been established at Macquarie Park has been the relationship between a technology-based university and a hospital. The Macquarie University Private Hospital creates the unique opportunity to establish a world-class health facility linked to a leading research university. It also supports one of the key initiatives of the Metropolitan Strategy, the need to increase opportunities for innovation and skills development. The development of hospitals and research institutions are key magnet infrastructure that will promote these goals.

4.6 The Australian School for Advanced Medicine

For training in surgery, university programmes are the norm in the USA. Not so in Australia and New Zealand, where surgical training is supervised by the Royal Australasian College of Surgeons. Whilst the Australian system has proven to be excellent, the US model ensures that as surgical specialties grow in depth and breadth the underpinning scientific, ethical and pedagogical knowledge remains central to practising surgeons.

Macquarie University intends to establish the Australian School for Advanced Medicine which shall provide speciality post-graduate training in surgical specialisation. The model will be based upon world's best practice, shifting from the existing model based upon apprenticeship to a model underpinned by research, scientific investigation and a university accredited teaching model. The role of the Australian School for Advanced Medicine in Australia will be to help bridge the potential gulf between underpinning knowledge and the surgeon.

The aim of the Australian School of Advanced Medicine will be to educate medical practitioners in the specialty disciplines of surgery and medicine. The programme will have at its core the goals of facilitating learning to achieve a competent performance in the relevant medical specialty (including life-long learning skills), ethical performance, and skills to enable scholarship in the surgical and medical sciences. The initial three main products will be:

- Awards that help underpin knowledge necessary for surgical specialisation.
- Awards recognising a competent performance in surgical specialisation.
- Awards recognising additional skill development for surgical specialists

The four broad categories from which units of studies can be selected will be:

- Surgical Competency
- Basic Surgical Sciences
- Ethics
- Research and Teaching.

The creation of the Australian School of Advanced Medicine is only possible with the establishment of Macquarie University Private Hospital on the University's campus. It is anticipated that the Australian School of Advanced Medicine will link with the Macquarie University Hospital, utilising the hospital as a key teaching facility whilst the University provides the research and pedagogical support as well as access to an extensive range of science and health facilities.

4.7 A Health Science Precinct

The establishment of the Macquarie University Private Hospital on the Macquarie campus presents an exciting opportunity. Macquarie University is already a major centre of excellence in research and teaching including:

- The Australian Proteomic Analysis Facility – a national centre for proteomic research, testing and consultancy.
- The Centre for Cognitive Science
- The Centre for Audiology
- The Centre for Spinal Medical Research
- The Macquarie Research Institute for Biotechnology

In addition, there are a range of other associated areas of health and medical research and teaching across the University as well as relationships with other disciplines.

In keeping with its mission, the University has commercialised a number of its research successes working collaboratively with industry. Notable successes in the life sciences field include:

- The licensing of proteomic technology to BioRad
- The formation of Proteomes Systems Limited (PSL)
- The formation of Biotechnology Frontiers (BTF)
- The formation of Applimex Pty Ltd
- The formation of Lighthouse Aesthetics Pty Ltd – the development of aesthetic lasers
- The formation of Image Connections Australasia – the development of teleradiography services for the health and medical industries
- The formation of Fluorotechnics.

The creation of the Macquarie University Private Hospital is an opportunity to expand upon the dynamic environment already established on the Macquarie Campus via the formation of a health science precinct centred on the hospital. The hospital will attract specialist research facilities, additional research academics and students as well as the potential to foster health related, technology-based industry. The University will play a major role in stimulating this environment to further foster technology-based health and medical activity.

The Macquarie University Private Hospital will provide a significant contribution to enable Macquarie to fulfil its mission as a University relevant to industry and the source of innovation across the Macquarie Park Precinct.

4.8 Statutory Context

This Environmental Assessment Report (EAR) for Macquarie University Private Hospital is submitted to the Minister of Planning pursuant to Part 3A of the *Environmental Planning and Assessment Act 1979 (EP&A Act)* and *State Environmental Planning Policy (Major Project) 2005 (SEPP)*. It has been prepared to identify key potential issues associated with the proposed development on a site in Macquarie University Research Park, North Ryde.

This development clearly conforms with Group 7 of Schedule 1, which lists Clause 18 Health and Public Services – Hospitals, being a development of over $15m.

This report follows the letter received from the Department of Planning dated 14 July which states that the Minister of Planning has formed the opinion that the proposed development is a major project under Part 3A of the EP&A Act. The letter also requested the proponent to submit a project application and to apply for the Director General's Environmental Assessment requirements. (DG EARs)

On 9 August 2006 DG Environmental Assessment requirements were received (**Refer Appendix 1**). This assessment has been prepared to assist the Minister in determining the likely environmental consequences of the having regard to the matters listed for consideration.

4.9 Proponent and Consultant Team

This environmental assessment has been prepared on behalf of Macquarie University Private Hospital, a joint venture between Dalcross Hospital and Macquarie University, the proponent of this project.

The consultant team for the project includes:

- Health Projects International (Hospital Planning and Architecture)
- APP Corporation Pty Ltd (Project Managers)
- JBA Urban Planning Consultants (Urban Planning)
- KPMG (Strategic Planning)
- Northrop (Building Services/ESD Engineers)
- Northrop (Structural/ Civil Engineers)
- TEF Consulting (Traffic Engineers)
- Taylor Brammer (Landscape Architects)
- Boyden & Ptrs (Stormwater)
- Jeffery and Katauskas Pty Ltd (Geotech)
- HLA Envirosciences Pty Ltd (Environmental Site Assessment/Risk Assessment)