



THOMSON
ADSETT
ARCHITECTS



**APPLICATION FOR ASSESSMENT
UNDER PART 3A OF THE
ENVIRONMENTAL PLANNING & ASSESSMENT ACT 1979**

**NARRABRI
HOSPITAL
REVELOPMENT**

**NARRABRI DISTRICT
HEALTH SERVICE
AUGUST 2008**

**THOMSON
ADSETT
ARCHITECTS**

Brisbane | **Sydney** | Melbourne | Rockhampton | Northern Rivers | Kuala Lumpur | Jakarta | Hong Kong





THOMSON
ADSETT
ARCHITECTS

TABLE OF CONTENTS

TABLE OF CONTENTS	1
STATEMENT OF VALIDITY	2
EXECUTIVE SUMMARY	3
Key Assessment Requirements	4
DRAFT STATEMENT OF COMMITMENTS	6
STATUTORY PLANNING CONSIDERATIONS	9
The Site	9
Planning Instruments	9
PROJECT OVERVIEW & BACKGROUND	12
User Group Meetings & Consultation	14
URBAN FORM & DESIGN	15
Architectural Statement	15
Site Planning & Staging	17
ENVIRONMENTALLY SUSTAINABLE DESIGN	18
HERITAGE	20
ENGINEERING	21
Civil Engineering	21
Structural Engineering	21
Mechanical Engineering	21
Electrical Engineering	22
Hydraulic Engineering	22
Traffic	22
LANDSCAPE	24
ACOUSTICS	24
BUILDING CODE OF AUSTRALIA	24
PROGRAM	25
CAPITAL INVESTMENT VALUE	26
APPENDICES	27
1 Scheme Design Drawings and Illustrations	28
2 Staging Diagram	29
3 Copies of Enabling Works Documents	30
4 Mechanical Engineering Report	31
5 Electrical Engineering Report	32
6 Hydraulic Services Report	33
7 Geotechnical Report	34
8 Heritage Impact Statement	35
9 Traffic Impact Report	36
10 Acoustic Report	37
11 Medical Helipad Guidelines	38

Brisbane | **Sydney** | Melbourne | Rockhampton | Northern Rivers | Kuala Lumpur | Jakarta | Hong Kong



SYDNEY: Level 12, Centennial Plaza, 300 Elizabeth Street, PO Box K272, Haymarket, New South Wales 1240 Australia
Telephone +61 2 9903 3100 Facsimile +61 2 9903 3101 Email sydney@tagroup.com.au Web www.thomsonadsett.com

p:\6399 05 namabridges\1.00 client and authorities\1.02 authorities\05 town planning department\part 3a assessment\0608011-part 3a report - draft\080606-nam-part 3a-report.doc

Nominated Architects: Susan Kenny (SW), Steve Cost (SW), David Lane (SW), Dayne Mearns (SW), Christopher Straw (SW)

Thomson Adsett (NSW) Pty Ltd ABN 72 105 314 636



STATEMENT OF VALIDITY



THOMSON
ADSETT
ARCHITECTS

STATEMENT OF VALIDITY

Submission of Environmental Assessment

Prepared under Part 3 of the *Environmental Planning and Assessment Act 1979*

Environmental Assessment prepared by:

Name

Ken McPhail

Qualifications

B.SC.(Arch), B.Arch UNSW

Address

Thomson Adsett Architects
L12, 300 Elizabeth Street
Surry Hills
NSW 2010

In respect of the Redevelopment of Narrabri District Health Service at Narrabri Hospital

Applicant & Land Details

Applicant name

Health Administration Corporation

Applicant Address

73 Miller Street
North Sydney
NSW 2060
Australia

Locked Mail Bag 961
North Sydney
NSW 2059
Australia

Land to be developed

Narrabri Hospital – 11 Cameron St,
Narrabri NSW
Lot & DP Lot 107 DP1.036033

Statement of Validity

I certify that I have prepared the contents of the environmental assessment in accordance with the Director-General's Requirements dated 20 May 2008 and that to the best of my knowledge the information contained in the environmental assessment is neither false nor misleading.

Signature

Date: 8 August 2008

Brisbane | **Sydney** | Melbourne | Rockhampton | Northern Rivers | Kuala Lumpur | Jakarta | Hong Kong

SYDNEY: Level 12, Centennial Plaza, 300 Elizabeth Street, PO Box K272, Haymarket, New South Wales 1240 Australia
Telephone +61 2 9903 3100 Facsimile +61 2 9903 3101 Email sydney@tagroup.com.au Web www.thomsonadsett.com

c:\documents and settings\mcphail\desktop\statement of validity.doc

Nominated Architects: Susan Kenny (SW) Steve Costi (SW) David Lane (SW) Dayne Mearns (SW) Christopher Straw (SW)

Thomson Adsett (NSW) Pty Ltd ABN 72 105 314 636

EXECUTIVE SUMMARY

The *July 2007 Project Definition Plan* established that replacement of the existing Narrabri Hospital buildings is the only viable means by which improved, comprehensive health services can be provided to the local community.

The inappropriate and inflexible layout of the old hospital buildings impedes the application of current models of care and use of new technology.

The old buildings, which date from 1944, are below the official 1% average rainfall intensity (ARI) flood level, referred to as a 1 in 100 year flood. All new buildings are required to be at minimum RL 214.37, approximately 1700mm above the existing hospital ground floor.

NSW Treasury has approved a capital investment value (CIV) of \$26 million for the construction of the new Narrabri District Health Service campus. It is intended to be ready to call tenders by early December 2008.

NSW Department of Commerce, Newcastle, is the Project Director (Procurement).

Thomson Adsett Architects is the Principal Design Consultant. Thomson Adsett Architects has prepared this assessment application with the assistance of a team of specialist sub-consultants. A Statement of Validity is attached.

The first planning team meeting was held in December 2007.

The design process has included extensive consultation with Narrabri Council, local RTA, staff, users and the community, including a Community Presentation Meeting.

Enabling Works, comprising demolition and services diversions, are under way. Development Approval for demolition works was obtained from Narrabri Council. Enabling Works and Development Approval documents are included at Appendix 3. The Enabling Works form the first of three stages of redevelopment, the second being access from Gibbons Street, site works, construction of the new hospital facilities and decanting of the old buildings. The third stage is demolition of the old buildings, completion of site works and the new helipad.

On 29 April 2008, pursuant to Clause 6 of the State Environmental Planning Policy (Major Projects) 2005, the Director General, as delegate for the Minister for Planning, formed the opinion that the project meets the criteria in Clause 18, Schedule 1 of the Major Projects SEPP. The Director-General's Requirements for the EPAA Part 3A approval process were obtained On 20 May 2008. This report is a response to the Requirements. Approval to the project is now sought.

Key Assessment Requirements

Relevant EPI's, Guidelines and other requirements

All relevant environmental planning instruments, guidelines and other requirements have been considered in the preparation of this assessment. No areas of non-compliance have been identified.

Urban Form and Design

The urban form, bulk, density and scale of the project have been carefully considered in the planning and design of the project. This assessment contains extensive documentation illustrating its appropriate relationship with the site, surrounding properties and the community.

Amenity Impacts on Neighbouring Properties

There are minimal amenity impacts on neighbouring properties. Care has been taken in planning and design to avoid overshadowing and loss of privacy.

Transport, Traffic & Access

All internal roads are designed to comply with RTA Guidelines, including entry points, drop-off points and hierarchy of traffic movement. Off-street parking for 100 cars is provided along with bicycle storage and pedestrian pathways. Construction workers will park on site during construction. Temporary staff and user car parking is being provided in the Enabling Works.

Helipad

The helicopter retrieval service is an essential part of the delivery of comprehensive health services to the Narrabri community. An existing helipad on the site is adjacent to the Nurraby Child Care Centre. The new helipad is located as far as possible from occupied premises and will be designed in accordance with NSW Health and Australian Government regulations for medical helipads.

Construction Impacts

Geotechnical site investigation has determined that the site is suitable for the proposed works. Flood management studies by Narrabri Council have determined that the minimum occupied floor level must be RL 214.37. To achieve this a large proportion of the site will be filled to a depth of up to 1770mm by the importation of suitable fill from local sources. The filled area will fall back to natural ground levels on all sides to ensure appropriate management of overland storm water and flood water flows. The building is designed as a light-weight framed structure on a stiff concrete raft slab founded on the filled pad. There will be minimal need for excavation aside from services trenching. All construction waste will be sorted on site and recycling policies will apply. The construction site will be screened to minimize disturbance to adjacent activities. Construction traffic will use a dedicated entrance to the site from gibbons Street. A temporary entrance to the hospital for staff and public from gibbons Street is being provided by the Enabling Works. Significant local employment opportunities are anticipated during the construction phase.

Operational Impacts

The project replaces an existing inefficient hospital complex which is of a slightly larger gross floor area than the new building. All existing hospital services currently provided from the site will be maintained together with the relocation of Ambulance and Community Health from nearby sites. The hospital will maintain and extend as required its present policies of waste management, site and security



management to meet the needs of the redevelopment. Staff numbers will remain substantially unchanged.

ESD Measures

The new complex is being designed to meet the Green Building Council 4-star standard for health buildings in accordance with NSW Health policy. Measures include appropriate orientation of the buildings, sun shading, solar hot water, solar lighting systems, rainwater harvesting and recycling of demolished materials recovered in the Enabling Works.

DRAFT STATEMENT OF COMMITMENTS

Under S.75F (6) of the Act, the proponent may be required to include a Statement of the Commitments within the environmental assessment outlining the measures the proponent is prepared to make in respect of environmental management and mitigation at the site.

NSW Health's Draft Statement of Commitments for the project specifies how the project will be managed to minimise potential impacts both during construction and operation.

General

1. The development will be undertaken generally in accordance with the Environmental Assessment Report dated August 2008 prepared by Thomson Adsett Architects, including accompanying appendices and drawings.
2. The proponent is committed to the principles of sustainability as defined in the Environmental Planning and Assessment Act 1979. The construction and operation of the hospital will be undertaken in accordance with Premier's Memorandum No.2003-2 High Environmental Performance for Buildings and the requirements of the Environmental Performance Guide for Buildings (EPGB).
3. The proponent will obtain all necessary approvals required by State and Commonwealth legislation in undertaking the project.
4. The proponent will continue to liaise with the local community during the development process.
5. The proponent will continue to liaise with Narrabri Council during the development process.
6. The proponent will develop an environmental management plan, which identifies and demonstrates a commitment to positive environmental management for the project.
7. The design and documentation of the project will incorporate appropriate measures to comply with the relevant provisions of the Building Code of Australia for this class of building and type of construction.

Demolition

1. Demolition will be undertaken in accordance with the requirements of Australian Standard AS2601 – 2001: The Demolition of Structures which is incorporated into the Occupational Health and Safety Act 2000 administered by WorkCover NSW.
2. A Hazardous Building Materials Management Plan will be prepared prior to demolition of the old main buildings commencing.
3. Measures to control soil erosion during demolition will be introduced in accordance with currently accepted principles, as described in Managing Urban Stormwater (EPA NSW) and Soil Erosion and Sediment Control (The Institution of Engineers, Australia).

Access and Movement

1. An Access and Safety plan will be prepared to ensure that access during the redevelopment of the site maintains the safety of staff, visitors and patients.

Services

1. The proponent will comply with the requirements of the relevant public authorities in regard to the connection to, relocation and/or adjustment of services affected by the construction of the proposed development. Design and documentation of all services work will be undertaken in accordance with the specialist services reports appended to this Environmental Assessment.

Water Management

1. The design of the stormwater disposal system will be based on the latest edition of AR&R and Bureau of Meteorology ARI statistics, Authority guidelines and AS3500.

Vegetation

1. The proponent will provide landscaping in accordance with the developed landscape report and drawings.

Construction Management

Prior to commencing construction, a Construction Environmental Management Plan will be prepared and a copy submitted to the Department of Planning for information. This plan will include:

- Development of a site specific soil erosion and sediment control plan,
- Construction hours,
- Air quality/dust control procedures,
- Noise management procedures,
- Waste management plan,
- Flora and Fauna Protection Plan,
- Community Safety Plan,
- Arrangements for temporary pedestrian and vehicular access,
- Storage and Handling of Materials Procedures,
- Environmental Training and Awareness,
- Contact and complaints handling procedures,
- Emergency Preparedness and Response.

Measures to control soil erosion during construction will be introduced in accordance with currently accepted principles, as described in Managing Urban Stormwater (EPA NSW) and Soil Erosion and Sediment Control (The Institution of Engineers, Australia).

Access for People with Disabilities

The design of the facilities will permit effective, appropriate, safe and dignified use by all people, including those with disabilities and will be in accordance with:

- NSW Health Facility Guidelines, in particular Part B – Design for Access, Mobility, OH&S and Security.
- DDS32 Improved Access for Health Care Facilities.
- AS 1428.
- The Building Code of Australia.

Operation

An operational environmental management plan will be prepared prior to the opening of the hospital to the public, a copy will be submitted to the Department of Planning for information. The plan will address, but will not be limited to, the following matters:

- Protection of flora and fauna
- Minimisation of anti-social behaviour.
- Visitor safety.
- Site security.
- Noise management.
- Traffic and pedestrian management.
- Helipad operation
- Storage of materials.
- Emergency and evacuation procedures.
- Disaster, especially flood, management
- Fire safety.
- Waste management and ESD initiatives.
- Lighting.
- Signage.

Planning Agreements

The New South Wales Department of Health and Hunter New England Area Health Service are committed to establishing the scope and degree of planning agreements and contributions with the relevant Statutory Authorities. Due to the early stage of the project it is not possible to establish the extent and magnitude of contributions and agreements and these will need to be reviewed and assessed by the Department of Health and the Area Health Service once established.

STATUTORY PLANNING CONSIDERATIONS

The Site

The site of the project is Lot 107 in DP 1036033, 11 Cameron Street, Narrabri, NSW. It is owned by the Health Administration Corporation and is currently the site of Narrabri District Hospital, administered by Hunter New England Area Health Service.

Planning Instruments

Environmental Planning and Assessment Act 1979 (EP&A Act) and Regulation 2000

Part 3A of the Environmental Planning and Assessment (EP&A) Act 1979 took effect on 1 August 2005 and provides an assessment and approvals process for major infrastructure and other projects where the Minister for Infrastructure and Planning is the approval authority.

The provisions of Part 3A apply to major projects where the Minister has made a declaration relating to the specific development or a class of developments to which that project belongs. The Minister may declare a development to be a major project:

- in a State Environmental Planning Policy (SEPP); or
- in an order published by the Minister in the Gazette.

State Environmental Planning Policy (Major Projects) 2005 (Major Projects SEPP) identifies development to which Part 3A applies.

On 29 April 2008, pursuant to Clause 6 of the State Environmental Planning Policy (Major Projects) 2005, the Director General, as delegate for the Minister for Planning, formed the opinion that the project meets the criteria in Clause 18, Schedule 1 of the Major Projects SEPP. The Director-General's Requirements for the EP&A Part 3A approval process were obtained On 20 May 2008.

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) commenced on 16 July 2000. The Act introduces a new assessment and approvals system for:

- actions that have a significant impact on matters of national environmental significance;
- actions that have a significant impact on the environment of Commonwealth land; and
- actions carried out by the Commonwealth Government.

Under the assessment and approval provisions of the EPBC Act, actions that are likely to have a significant impact on a matter of national environmental significance are subject to a rigorous assessment and approval process. An action includes a project, development, undertaking, activity, or series of activities.

The Act identifies seven matters of national environmental significance:

- World Heritage properties;
- National Heritage places;
- Ramsar wetlands of international significance;
- nationally listed threatened species and ecological communities;
- listed migratory species;

- Commonwealth marine areas; and
- nuclear actions (including uranium mining).

The Government is considering amendments to the EPBC Act and its regulations to include "greenhouse triggers" and "access to biological resources".

There are no relevant World Heritage properties, National Heritage places, Ramsar wetlands, Commonwealth marine areas or Commonwealth lands on the site.

It is concluded therefore that there will not be a significant impact on any matters of national environmental significance arising from the development of the site, and consequently the proposed activity is not considered to be a "controlled action" pursuant to the EPBC Act.

State Environmental Planning Policy (Major Projects) 2005

The State Environmental Planning Policy (Major Projects) 2005 is the principle instrument for nominating projects which are of State or regional environmental planning significance and are declared to be projects to be determined by the Minister under Part 3A. The SEPP includes three schedules which list major projects:

- Schedule 1 containing classes of projects that are major projects. For each class, specific criteria have been nominated – for example, capital investment value, scale of operation, number of jobs or environment sensitivity or risk.
- Schedule 2 containing major projects on specified sites. This schedule lists specified sites and nominates the criteria for major projects on those sites based on the State or regional planning objectives for the particular site.
- Schedule 3 lists State significant sites along with any planning provisions to apply to that site. It also lists the major projects on the site to be determined under Part 3A. At this stage only the Opera House is sited as a State Significant site with all development (except for exempted development) to be a major project on the site.

The Narrabri District Health Service Redevelopment project falls within Schedule 1.

State Environmental Planning Policy No. 55 (Remediation of Land)

SEPP55 requires the consent authority to consider whether the subject land of any rezoning or development application is contaminated. If the land requires remediation to ensure that it is made suitable for a proposed use or zoning, the consent authority must be satisfied that the land can and will be remediated before the land is used for that purpose. SEPP55 further requires the preparation of a report specifying the findings of a preliminary investigation of the land concerned, carried out in accordance with the contaminated land planning guidelines, to be considered by the consent authority before determining an application for consent to carry out development that would involve a change of use on that land.

The Geotechnical & Environmental Report No 06-GN93A by NSW Department of Commerce dated March 2008, is attached. The report concludes that the site is suitable for the proposed development.

**Narrabri Local Environmental Plans No 2 and 1995**

The site is situated within the Narrabri Local Government Area. Planning controls applicable to the site are contained in the Narrabri Local Environmental Plans (LEPs). The site is zoned Special Uses.

The proposed development is consistent with the relevant provisions of the Narrabri LEP No 2 and 1995. The proposed development is permissible under Narrabri Council's planning controls.

PROJECT OVERVIEW & BACKGROUND

(Extract from the Narrabri Hospital Project Definition Plan, July 2007)

The Narrabri District Health Service Project involves the construction of a new health care facility in Narrabri to facilitate the development of a comprehensive, networked service delivering district health services to the Narrabri area which includes the vast agricultural areas stretching from the Pilliga Scrub to the Moree Plains. The new facility will be developed as an integrated acute, primary and community health care centre on the existing hospital site, together with the co-location of the ambulance service at an estimated capital investment value of \$26 million.

Narrabri is 172km north-west of Tamworth, 98km from Moree and 97km from Gunnedah. The Narrabri District Health Service has a catchment population of around 10,000 spread over an area of about 10,000 square kilometres that lies primarily to the west of Narrabri and includes Wee Waa, Pilliga, Gwabegar and Burren Junction. The challenge for NSW Health is to address the health needs of these rural communities while dealing with the difficulties presented by distance, isolation and a highly dispersed population.

Local staff and the local community have identified the key organisational issues to maintain the quality and sustainability of health services to the Narrabri district.

They are:

- Workforce – including recruitment and retention, training and development,
- Buildings and infrastructure – dysfunctional clinical relationships with particular reference to the configuration and excessive size of the existing hospital,
- Information Technology – including the inability to adapt existing infrastructure for appropriate Telehealth services, and
- Equity of funding and resources – particularly the equitable distribution of resources in rural areas and providing health services close to home.

At the centre of these challenges is the need to extensively rebuild or reconfigure the physical aspects of the existing hospital. A practical and functional working environment is an important factor in attracting and retaining staff and the existing Narrabri hospital does not provide this.

The creation of an integrated district health service can be best achieved by constructing a new, compact and efficient single storey building on the existing hospital site which is central to Narrabri and close to the retail area, and has the advantage of having the support of two neighbouring aged care providers.

The site is owned by the Health Administration Corporation and is large enough for the new facilities to be constructed whilst the existing hospital remains operational.

The preferred option aligns with the NSW State Health Plan and the NSW Health's Strategic Directions, as well as:

- Hunter New England Health's Strategic Directions (August 2006)
- Hunter New England Health's Asset Strategic Plan (August 2006)
- Narrabri District Health Service Plan 2007-2011 (February 2007)



In the development of the preferred option there has been strong support from the local community, including the Narrabri Shire Council, nursing and medical staff, and representatives of the local Aboriginal community.

The preferred option addresses the organisational issues raised by Hunter New England Health and the local community by building modern health facilities that can provide better health care, more effective staffing arrangements and enable the Area to take advantage of new health technologies. A new practical and functional working environment will significantly assist in attracting and retaining key healthcare providers that are essential for maintaining the quality and sustainability of health services to the Narrabri district. The expected benefits will include the strengthening of local partnerships and improved working relationships, as well as improved accessibility to health services.

The proposed bed configuration addresses the specific needs of differing streams of service and maximises the effectiveness of staff. It also improves access to primary care and diagnostic services, and will assist the emergency department to meet the high demands placed on it.

A capital investment value of \$26million has been approved for the preferred option to enable the construction a new, compact single storey health facility on the existing hospital site, a new ambulance station and additional residential accommodation for staff and students. The budget estimate allows for the floor level of the new buildings to be constructed up to 1.77meters above ground level as an appropriate response to potential flooding of the site in a 100 year flood.

A key outcome of the preferred option is to co-locate and integrate the health services in Narrabri and achieve savings in overhead costs and redirect these savings to front line health services. There are no inherent drivers in the preferred option that should increase the overall recurrent costs for the Narrabri Health Service.

User Group Meetings & Consultation

User Group Meetings are held on site to refine details of the agreed design.

Discussions have been held with Narrabri Council and local RTA representatives in regard to site planning, development, traffic generation and traffic management. As the supply authority Narrabri Council has been consulted with regard to water supply, sewer and stormwater. Country Energy has been consulted on matters relating to power supply to the site. NSW Ambulance and representatives of the helicopter medical retrieval service have been and will continue to be consulted in the development of the project.

Consultation is also proceeding with representatives of the Aboriginal Land Council on planning initiatives to meet particular needs of indigenous community members. Social and cultural issues have been considered in the planning and design of public areas and inpatient accommodation. The local Land Council has expressed full support for the project and will coordinate indigenous participation in the incorporation of appropriate elements (eg artworks, sculpture) in both interior and exterior spaces. Landscape design in nominated locations will reflect elements significant to Aboriginal culture. A mural is planned for one wall in the entry courtyard. Site planning includes provisions to accommodate large groups, particularly in connection with families and supporters of palliative care patients.

URBAN FORM & DESIGN

Architectural Statement

Thomson Adsett Architects (TAA) has been appointed as Principal Design Consultant for the project. Under the direction of NSW Department of Commerce as Project Director (Procurement), TAA and its team prepared several broad planning concepts. In the course of extensive User Group, Project Planning Team and Planning and Development Committee consultation meetings an agreed concept has been chosen. The agreed concept plan, in its current form, is attached to this submission.

Preparation of the site for the new works is being carried out in an Enabling Works Package comprising demolition of non-essential structures, relocation/ diversion of services and construction of temporary road and car parking areas. This will be followed by the Main Works Package which will comprise construction of the new hospital facility, demolition of the old hospital building and completion of essential site works of landscaping, parking and the helicopter landing pad.

The agreed concept is a single storey complex with a central main access corridor or "street" giving access to individual clinical areas. The project has an overall gross floor area of approximately 4,700 square metres. It features extensive use of courtyards and outdoor spaces as an integral part of the design, retaining an appropriate scale to the individual areas of the hospital. In order to achieve the required finished floor level of RL 214.37 the building will be constructed on a pad of engineered fill material up to 1770mm deep which will terrace down to existing levels at the perimeter. Care has been taken to ensure that, despite the elevation of the pad, there is minimal overshadowing of neighbouring properties. Shadow diagrams for summer and winter and site sections are included in the drawings in Appendix 1.

The architectural form of the project is one of pavilions containing the hospital planning units linked by a central spine corridor. Access to the new complex will be via Gibbons Street. Those units with the highest degree of public contact, Imaging, Pathology, Primary & Community Health and Emergency, are located adjacent to the main entry. The centre of the complex is made up of Inpatients on the east, facing courtyards which overlook the adjacent Narrabri Creek bank and the Operating Theatres, Day Surgery and CSSD on the west. Those areas requiring least access by patients and the public, such as Staff Amenities, Offices / Education and Catering are located at the northern end. A Support Cluster provides stores, maintenance and plant areas and is adjacent to the Mortuary. All service / support areas are accessed by a dedicated road.

The Ambulance Station is a free-standing building adjacent to the new hospital. Its location on site provides direct access to Gibbons Street. New staff accommodation buildings in the form of a four-bedroom cottage and a 2-storey duplex unit pair are located adjacent to the existing staff cottage, forming a courtyard.

Rooftop plant rooms are located directly above each fire compartment and provide vertical elements to balance the predominant horizontal composition of the building. Re-used bricks from the old buildings are to be used in selected areas as a reference to the original structures. External walls elsewhere will be of pre-finished Colorbond steel. The cladding profile will be selected to relate to common materials seen in the district's rural buildings. The roof is also Colorbond steel deck.



Internal and external colours and finishes will be selected in consultation with users. Only materials offering the required levels of durability and performance will be considered. An indication of proposed materials and finishes is given in Appendix 1 on drawing SD 213 - Materials and Finishes.

Site Planning & Staging

It is essential to continue all existing hospital activities on site during the redevelopment. The location of the existing hospital building (the 1944 building and its 1973 extension) does not permit completion of the redevelopment without their removal. The project has been designed to allow hospital services to continue throughout construction and commissioning of the new facilities. This is achieved by staging the development.

Stage One

Enabling works have achieved demolition of disused ancillary buildings so as to clear the site. Some recovered materials will be used in the new works. Enabling works have also diverted and relocated essential services and are providing a temporary sealed access road into the hospital and sealed temporary car parking areas.

Stage Two

The new main building, new permanent access from Gibbons Street and sections of internal roadways will be constructed on a raised pad some 1700mm deep, on vacant land. Construction of the Ambulance Station and new staff accommodation will follow this phase, removing the temporary access road. During the commissioning phase both new and old hospital facilities will operate as services are transferred, including Primary and Community Health moving onto the site from their present remote location.

Stage Three

At the conclusion of commissioning the old hospital buildings will be demolished, making way for the completion of the building pad, internal roadworks and the new helipad. Some recovered materials will be used as filling for this section of the pad.

The pad on which the new buildings are constructed has been planned to minimize impact to the site and adjacent properties. The internal site road runs around the perimeter of the pad and provides access to all areas. Parking bays are distributed along the road. Emergency-only vehicle access will be retained to the Cameron Street gates to provide the site with alternative access at all times.

The pad tapers down to natural ground level at all boundaries to ensure a ready means of floodwater drainage to Narrabri Creek. Wherever possible the pad embankments are at a slope of 10 degrees or less for ease of maintenance and to minimize floodwater scouring. Those sections where embankments are steeper will be stabilized and planted to prevent erosion.

The helicopter retrieval service is an essential part of the delivery of comprehensive health services to the Narrabri community and will continue this role in the new development. The service functions on an emergency-only basis. The existing helipad is located on the hospital site adjacent to Narraby Child Care Centre. The new helipad has been located to maximise distance from the new buildings and adjacent properties. It is connected to the site's internal road system and is readily accessible from the new Gibbons Street entry. The helipad will be designed to meet the requirements of NSW Health Policy Directive PD2005-128 "Medical Helipads – Guidelines" and the Civil Aviation Safety Authority Guideline 92-2(i), 1996 for helicopter landing sites.

ENVIRONMENTALLY SUSTAINABLE DESIGN

NSW Department of Health Policy requires that new healthcare buildings be designed to achieve 4 stars in the Green Building Council Greenstar rating system. While there is not at present a Greenstar Tool for healthcare buildings, the outcomes of the healthcare tool pilot program are known. Design is proceeding with the incorporation of the passive and active elements required to achieve at least a 4-star rating. A BASIX assessment will be prepared for the staff accommodation component.

The building is orientated north-south for optimum solar access to inpatient and occupied staff areas. This also offers control and protection from undesirable southwesterly winds, particularly to the courtyard areas. An assessment of local weather patterns has been made using data from the Moree weather station. These are summarized on the attached Site Analysis drawing.

Passive and active ESD principles are being incorporated into the development of the design including

- Building orientation
- window sun shading to exclude summer sun, admit winter sun and exclude western sun
- insulation to walls and roof areas
- indoor sunlight system – see below
- suitably-rated window systems
- rainwater harvesting
- solar hot water heating
- heat recovery from air conditioning systems
- low embodied-energy materials
- low VOC finishes
- floor coverings such as vinyl utilizing a high level of recycled materials
- recycling of recovered building materials from demolition
- low energy lighting systems
- intelligent building management systems to minimize energy usage
- provision for on-site bicycle storage for riders
- low-water plant selection for landscaping
- use of local products where possible to reduce transport
- localized air conditioning and ventilation plant to suit varying times of usage
- provision for mounting of photovoltaic arrays

Demolished materials such as brick and concrete are proposed for re-use as fill in constructing the building pad. Suitable bricks recovered from the original buildings will be used in building and landscaping works. Demolition will include the appropriate removal and disposal of asbestos materials in the existing structures.

Thomson Adsett Architects' Greenstar Professional, Susan Plowman, will oversee ESD measures throughout the development of the documents.



Solar Lighting System

A system of introducing sunlight deep into the building via fibre optic technology is being investigated as a means of both improving the interior environment and saving on energy for lighting during the day. The "Parans" indoor sunlight system, distributed in Australia by SkyDome Holdings, has been incorporated into the design for the main circulation corridor and corridors in several of the departments. This is considered especially appropriate for Narrabri, which has a high annual proportion of sunny days.

The system uses fresnel lenses to concentrate sunlight into fibre optic cables which can transmit the light up to 30 metres away without heat or UV transfer. This has been proven in overseas trials to substantially reduce energy requirements for lighting as well as increasing the quality of the interior environment for occupants by bringing sunlight into otherwise artificially-lit areas. An important benefit is the improvement in the working environment with attendant improvements in staff morale. The fibre optic cable technology avoids the need for light shafts and high-level windows, reducing capital and operational costs. SkyDome is also developing alternative "light-pipe" systems taking advantage of Australia's high sunlight levels. These are expected to have a lower capital cost for the same resulting benefits. Developments are being monitored by the project team.



The Parans System

Imagine an indoor environment where the feeling of outdoor light is always present - a house with sunlight in every room. With this brochure, Parans introduces the pleasure of introducing the second generation revolutionizing Parans System.

The Principle

In the sketch to the left, the simple principle of the Parans System is shown. First, sunlight is collected by Parans Solar Panels. The sunlight is then brought into the building through the Parans Optical Cables. Indoors, the sunlight flows out through Parans Luminaires. This technology is called Fiber Optic Solar Lighting.

Parans Solar Panel

The Parans Solar Panel can be mounted on roofs or facades. It plays an array of optical lenses to collect and concentrate sunlight. It is easily installed and integrable with buildings' facades to allow for architectural integrity.

Parans Optical Cable

The Parans Optical Cable is made of several thin fiber optic cables. The cable is thin and flexible. Thanks to the high light transmission, sunlight can efficiently reach many locations far into buildings.

Parans Luminaires

In the chosen rooms, the sunlight is emitted through a Parans Luminaire, specifically designed to recreate the feeling of sunlight. The luminaire is available to match the outline, purpose and atmosphere of the specific room that is illuminated with the healthy sunlight.



HERITAGE

The existing three storey hospital was built in 1944 during WWII and extended in 1973. This older style, multistorey hospital requires more staff than a single storey hospital of the same size and is more expensive to maintain. Security for staff and patients after normal business hours is a significant issue. Meeting current health facility guidelines, Australian building codes and OH&S guidelines is also increasingly a major problem in a building that is difficult to refurbish. A wide range of problems and shortcomings are readily identifiable in the existing buildings and although there have been a number of improvements made over recent years, there is a limit to what can be done to meet current accommodation standards and accreditation requirements. For example, failure of the old single 1944 lift and the narrow stairs makes the movement of patients between floors very difficult and the ground floor of the hospital will be inundated during a major flood event.

A Heritage Impact Statement (HIS) has been prepared by Weir & Phillips, Heritage Architects and is located at Appendix 8. The HIS recommends archival recording of the building in its present form before demolition as part of the redevelopment project. Recovery and interpretation of significant elements such as commemorative plaques, memorabilia, etc, is recommended and has been included in the design in the form of a "memory wall" in the new main entry reception area.

HERITAGE

The existing three storey hospital was built in 1944 during WWII and extended in 1973. This older style, multistorey hospital requires more staff than a single storey hospital of the same size and is more expensive to maintain. Security for staff and patients after normal business hours is a significant issue. Meeting current health facility guidelines, Australian building codes and OH&S guidelines is also increasingly a major problem in a building that is difficult to refurbish. A wide range of problems and shortcomings are readily identifiable in the existing buildings and although there have been a number of improvements made over recent years, there is a limit to what can be done to meet current accommodation standards and accreditation requirements. For example, failure of the old single 1944 lift and the narrow stairs makes the movement of patients between floors very difficult and the ground floor of the hospital will be inundated during a major flood event.

A Heritage Impact Statement (HIS) has been prepared by Weir & Phillips, Heritage Architects and is located at Appendix 8. The HIS recommends archival recording of the building in its present form before demolition as part of the redevelopment project. Recovery and interpretation of significant elements such as commemorative plaques, memorabilia, etc, is recommended and has been included in the design in the form of a "memory wall" in the new main entry reception area.

ENGINEERING

Civil Engineering

Earthworks will be required to construct a surface profile across site to allow the continued operation at the time of a 1 in 100 year flood. This will require the importing and compaction of controlled fill likely to be from accessible gravel or approved borrow pits in the immediate vicinity of the Narrabri township or nearby.

A geotechnical investigation has been conducted found that the foundation material is suitable for the proposed project. The report is attached at Appendix 7.

The drainage philosophy will be to direct (via stormwater pipes) collected surface stormwater toward the creek on the east side of the site. The exception to this may be that the proximity and size of the proposed staff accommodation at the south end of the site may allow the collected roof stormwater to be directed to Gibbons Street.

Stormwater detention and retention may be provided as there is significant capacity for this due to the large impervious catchment, modern proprietary filtration stormwater pits and scope for storing captured stormwater in tanks placed within the earth mound. Roof stormwater will be harvested and used for toilet flushing, vehicle and landscape irrigation.

Road and parking pavements are to be asphalt sealed unless concrete or unit paving is specified for specific areas as part of the landscape design.

Structural Engineering

As the hospital is to be single storey it is proposed to arrange the structural elements so that building loads are widely distributed across the building footprint. A waffle raft slab is considered, in this case, to be the best method of providing a foundation with uniform stiffness throughout to handle likely external and internal loads and possible long term settlement of the controlled fill mound. The ambulance building may vary from this approach due to the vehicle concentrated loads.

Building articulation is to be incorporated throughout the building located to suit architectural features. Depending on the roof geometry roof trusses are likely to be the predominant structural element although some steel framing may be used in some areas. Vertical loads will be carried on steel columns within the non-loadbearing framed walls.

Mechanical Engineering

The air conditioning, ventilation and medical gas design shall be based on the NSW Health Engineering Services & Sustainable Development Guidelines Technical Series TS11. The requirements for Sustainable Development and the Government Energy Management Policy (GEMP) shall be major drivers of the design. The requirements of the BCA Part J will be followed as will the provisions of the Green Building Council Greenstar Health Buildings pilot assessment tool.

A risk analysis for the mechanical services design for the building construction, operation and maintenance of the hospital building will be carried out as part of the design and construction process. The mechanical services design shall include system arrangement to control specific risk factors within the facility with numerous departments with varying operational requirements. A detailed report by Ashburner Francis, Consulting Engineers, is at Appendix 4.

Electrical Engineering

The energy management guidelines outlined in the NSW Health Engineering Services and Sustainable Development Guidelines Technical Series TS11 will be incorporated into all components of the electrical services design.

It has been determined that the existing site substation is inadequate for proposed loads. As its location interferes with the proposed development a temporary pole-mounted station is included in the Stage One Enabling Works. A new permanent pad-mounted substation is included in the Stage Two Main Works.

Particular requirements relating to Green Star Healthcare (pilot) and BCA Part J will be incorporated.

A complete risk analysis for the electrical services design for building construction, operation and maintenance will be carried out as part of the design and documentation process. A detailed report by Ashburner Francis, Consulting Engineers, is at Appendix 5.

Hydraulic Engineering

All hydraulic systems will be designed to meet local authority requirements as well as the NSW Department of Health's own stringent standards. Rainwater harvesting will be used for toilet flushing and vehicle washing in addition to irrigation. Appropriate measures will be taken to account for local water and quality issues. Poor quality supply (flow and pressure) from the town water supply main in Gibbons Street has prompted the decision to utilize underground potable water storage and above-ground fire-fighting water storage tanks. A detailed report by Glenn Haig & Associates is attached at Appendix 6.

Traffic

A site traffic Master Plan will be prepared to achieve the most desirable outcomes in terms of traffic and road safety provision for the development, and will cover issues such as site access, parking demand/requirements, internal circulation, service vehicle requirements, connections with the surrounding network, pedestrian access and mobility etc.

The need to park up to 100 cars on site has been identified. This is considerably higher than normally expected for a facility of this scale and reflects the lack of transport options available to Narriabri residents. It is proposed to provide sealed, kerbed and guttered internal roadways and parking areas. Provision is included for the use and storage of bicycles.

The Master Plan includes a traffic analysis to assess development trip generation, traffic distribution and network assignment, capacity analysis and intersection assessment of adjacent road network together



with assessment of public transport facilities. Particular emphasis has been given to the efficient movement of emergency vehicles into and out of the site.

NSW Department of Commerce has advised in writing that Narrabri Council will not be seeking upgrading of local street intersections as part of the project.

In response to issues raised by RTA it is confirmed that Gibbons Street is the primary designated vehicular access to the redeveloped site. Access from Cameron Street is retained for the existing right of way to Namoi Aged Care Centre and for authorized emergency vehicles only via a new dedicated internal road. This road will function primarily as a pedestrian pathway across the site from Cameron Street. This is illustrated on the Landscape Plan at Appendix 1.

The Nurraby Child Care Centre has previously been permitted to park vehicles on the hospital site by an informal agreement between the Centre and the hospital. The need to elevate the new hospital site will prevent this arrangement continuing. Hunter New England Area Health Service has conveyed this advice to the Child Care Centre.

A Traffic Assessment Report by TTM Group is attached at Appendix 9.

Ken McPhail

From: Ben Abell [Ben.Abell@commerce.nsw.gov.au]
Sent: Friday, 8 August 2008 11:23 AM
To: Ken McPhail; Susan Dickson
Cc: Jack Domis; Mark QUEENAN; Carmen.Taing@hinfra.health.nsw.gov.au;
John.Sung@hinfra.health.nsw.gov.au
Subject: Narrabri Hospital Redevelopment - potential roadworks

Ken,

A meeting in relation to the Narrabri Hospital Redevelopment Project was held on Wednesday the 21st of May 2008 at the Narrabri Shire Council (NSC) Chambers with Max Kershaw (NSC General Manager), Bill Birch (NSC Economic Development Manager), Mark Queenan (NSW Commerce - Project Director) and myself.

Discussion included the potential for roadworks at the Gibbons and Newell intersection as a result of the project. A conclusion was reached that it would be unfair to the residents of Narrabri if such roadworks were taken out of the Health Service development (project) budget. If any roadworks at the Gibbons and Newell intersection were required they would be funded by other sources.

Regards,

Ben Abell

Project Officer
NSW Department of Commerce
PO Box 2297
DANGAR NSW 2309

Phone: 02 4908 4916
Fax: 02 4908 4954
Mobile: 0401 717 412
Email: ben.abell@commerce.nsw.gov.au

This email message, including any attached files, is confidential and intended solely for the use of the individual or entity to whom it is addressed.

The NSW Department of Commerce prohibits the right to publish, copy, distribute or disclose any information contained in this email, or its attachments, by any party other than the intended recipient.

If you have received this email in error please notify the sender and delete it from your system.

No employee or agent is authorised to conclude any binding agreement on behalf of the NSW Department of Commerce by email. The views or opinions presented in this email are solely those of the author and do not necessarily represent those of the Department, except where the sender expressly, and with authority, states them to be the views of NSW Department of Commerce.

The NSW Department of Commerce accepts no liability for any loss or damage arising from the use of this email and recommends that the recipient check this email and any attached files for the presence of viruses.

LANDSCAPE

The successful integration of indoor and outdoor spaces as part of the overall design of the new Narrabri Health Service is dependent on appropriate landscaping. Meetings have been held with local indigenous representatives as part of the planning process, particularly with respect to the design of the courtyard areas. In addition to their role in providing shelter and outlook these spaces are seen as an important element in providing appropriate, dignified places for larger numbers of people that may be comfortably accommodated inside the building at various times.

Landscape elements will comprise grassing for general areas with shrub plantings to nominated courtyard garden beds. Embankments arising from the need to elevate the building above flooding levels will be grassed on slopes of 10 degrees or less for ease of maintenance. Those of a steeper slope will be stabilized and planted with selected species to help bind the surface and retain moisture. Harvested rainwater is to be used for controlled irrigation of planted areas. This methodology has proven to be the most water-efficient when combined with drought-resistant species as water is expended in a minimal and controlled way, avoiding wasteful inundation by hand watering.

Landscape plans are attached at Appendix 1 and a Landscape Report is found at Appendix 10.

ACOUSTICS

Noise Emission

The noise emission from the redeveloped Narrabri Hospital will be designed to meet the standards set by the Department of Environment and Climate Change outlined in their Industrial Noise Policy. Helipad activity will be included in acoustic assessments.

Internal Acoustics

The sound levels within the redeveloped Narrabri Hospital from the building services will be designed to meet the standards set by AS2107:2000 "Acoustics – Recommended design sound levels and reverberation times for building interiors".

The acoustic report is located at Appendix 11.

BUILDING CODE OF AUSTRALIA

All buildings will be designed and detailed to meet the requirements of the Building Code of Australia for their relevant classification, including the requirements of Part J. The main building is Class 9 and is of Type C construction, being a single storey structure. Construction is generally non-loadbearing framed walls, incorporating all necessary fire and smoke resistance requirements. The structure is steel columns and beams supporting a trussed roof frame.

PROGRAM

The project program has been determined as follows:

- Lodge preliminary Part 3A submission April 2008
- Tender Enabling Works May 2008
- Lodge Enabling Works DA May, 2008
- User Group sign-off of concept plans May 2008
- Lodge Part 3A Application August 2008
- Complete Enabling Works October 2008
- Tender Main Works early December 2008
- Complete main new hospital building and ambulance station mid 2010.



CAPITAL INVESTMENT VALUE

Page Kirkland Partnership, as QS for the PDC Team, has advised that the CIV is \$26m as per the following advice.



Page Kirkland Group

9th July 2008

Thompson Adsett Architects
Level 12 Centennial Plaza
300 Elizabeth Street
SYDNEY NSW 2010

Attention: Ken McPhail

Dear Ken

Re: Narrabri Hospital Redevelopment – Preliminary Schematic design Cost Plan:

As requested we have prepared and attach herewith our Preliminary Schematic Design Cost Plan in the sum of **\$ 26,000,000.00** exclusive of GST at July 2008

As you are aware our estimate has been prepared from preliminary information – in the absence of Structural & Civil Design we have made our own assumptions – our allowances are detailed within the Cost Plan

Estimates in respect of Services have been prepared by Page Kirkland based upon historical data for similar projects and as such should be considered as indicative only subject to review by the relevant Services Consultant.

Should you require any further information please contact the undersigned.

Yours sincerely,

PAGE KIRKLAND COFFS HARBOUR

Del Evans

Digitally signed by Del Evans
DN: cn=Del Evans, o=Del Evans, email=del.evans@pagekirkland.com, c=AU
Date: 2008.07.09 11:48:29 +10'00'

Del Evans

Manager Coffs Harbour

Encl. Preliminary Schematic Design Cost Plan No 1 dated July 2008

Page Kirkland Cost Management Pty Ltd ABN 96 093 302 455 A member of **Page Kirkland Group**
INTERNATIONAL PROPERTY & CONSTRUCTION CONSULTANTS

90 West High Street Coffs Harbour NSW 2450 Australia

Telephone 61 2 6652 4636 Facsimile 61 2 6652 4824 Email coffsharbour@pagekirkland.com www.pagekirkland.com

OFFICES Abu Dhabi Albany Auckland Bangkok Beijing Brisbane Canberra Coffs Harbour Dubai Hanoi Ho Chi Minh City Hong Kong Kuala Lumpur
Los Angeles Macau Melbourne Perth Shanghai Singapore Sydney Tokyo ASSOCIATED OFFICES Adelaide South Africa Sri Lanka

APPENDICES

- 1 Scheme Design Drawings & Illustrations*
- 2 Staging Diagram*
- 3 Copies of Enabling works Documents*
- 4 Mechanical Engineering Report*
- 5 Electrical Engineering Report*
- 6 Hydraulic Engineering Report*
- 7 Geotechnical Report*
- 8 Heritage Impact Statement*
- 9 Traffic Impact Report*
- 10 Landcape Report*
- 11 Acoustic Report*
- 12 Medical Helipad Guidelines*



1 Scheme Design Drawings and Illustrations