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ORANGE-BLOOMFIELD HOSPITAL REDEVELOPMENT

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Contents:

Executive Summary	Page 3
Master planning	Page 3
Carparking	Page 3
Footprint	Page 5
Landscape	Page 7
Vehicular/Pedestrian Movement	Page 8
Architectural Expression	Page 11
Heritage	Page 12
Environmentally Sustainable Design	Page 15

Appendix A - Architectural Drawings	Page 16
Appendix B - Landscape Drawings	Page 17
Appendix C - Heritage Impact Statement	Page 18
Appendix D - Bid ESD Summary	Page 19
Appendix E - Meeting Minutes	Page 20

Executive Summary:

This report documents the modification to the approved major project 06-0111, Orange-Bloomfield Hospital Re-development. The report outlines changes made to the approved scheme, highlighting amendments in footprint, master planning and planning for the purpose of modification to the approved scheme.

Master Planning:

The proposed scheme reflects the master planning strategies of the approved Project on site, with the new general hospital (GH) located at the north of the site on the existing oval, the Acute Mental Health (AMH) directly to the south, and the new Forensic Mental Health (FMH) situated to the west of buildings 42 and 43, and north of building 56, Canobolas clinic.
The general hospital and AMH buildings have moved approximately 15m to the north, to create a closer relationship between AMH and the operational areas of the general hospital. This is a result of the consultation process with NSW Health to improve clinical and operational services between the two facilities. The other benefit of moving AMH to the north is an improved retention of heritage gardens and their curtilages through an increase in the landscaped areas between the new buildings and existing buildings on site.

(See architectural drawing SK-01.01 master plan in Appendix A for site arrangement)

Carparking:

Carparking numbers remain as per the approved scheme, however due to the introduction of radiotherapy and vehicular access to the AMH building, the layout of the staff/public car park to the east of the general hospital has been amended (see Figure 1/2). The buffer zone between the public car park to the west of the general hospital has also been improved along with the protected tree zone adjacent to Forest Road (See Figure 1/2). This is achieved through minor adjustments to planning of this carpark, increasing the landscape buffer between the carparking and protected trees. Further to this, localised building parking arrangements throughout the site have been amended to suit clinical and service requirements for individual buildings.

(See architectural drawing SK01.01 Master Plan in Appendix A for parking layouts and break up)

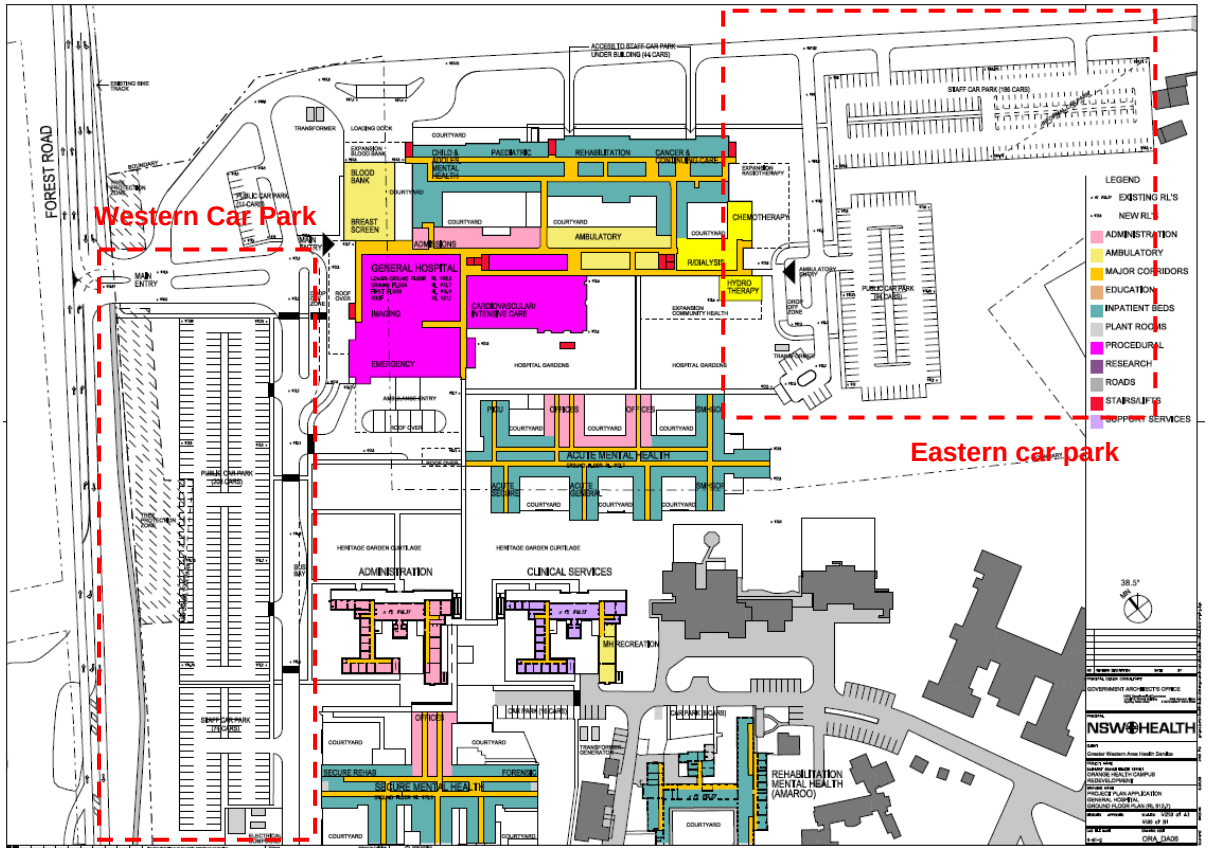


Figure 1: Part Site Plan – Approved Scheme

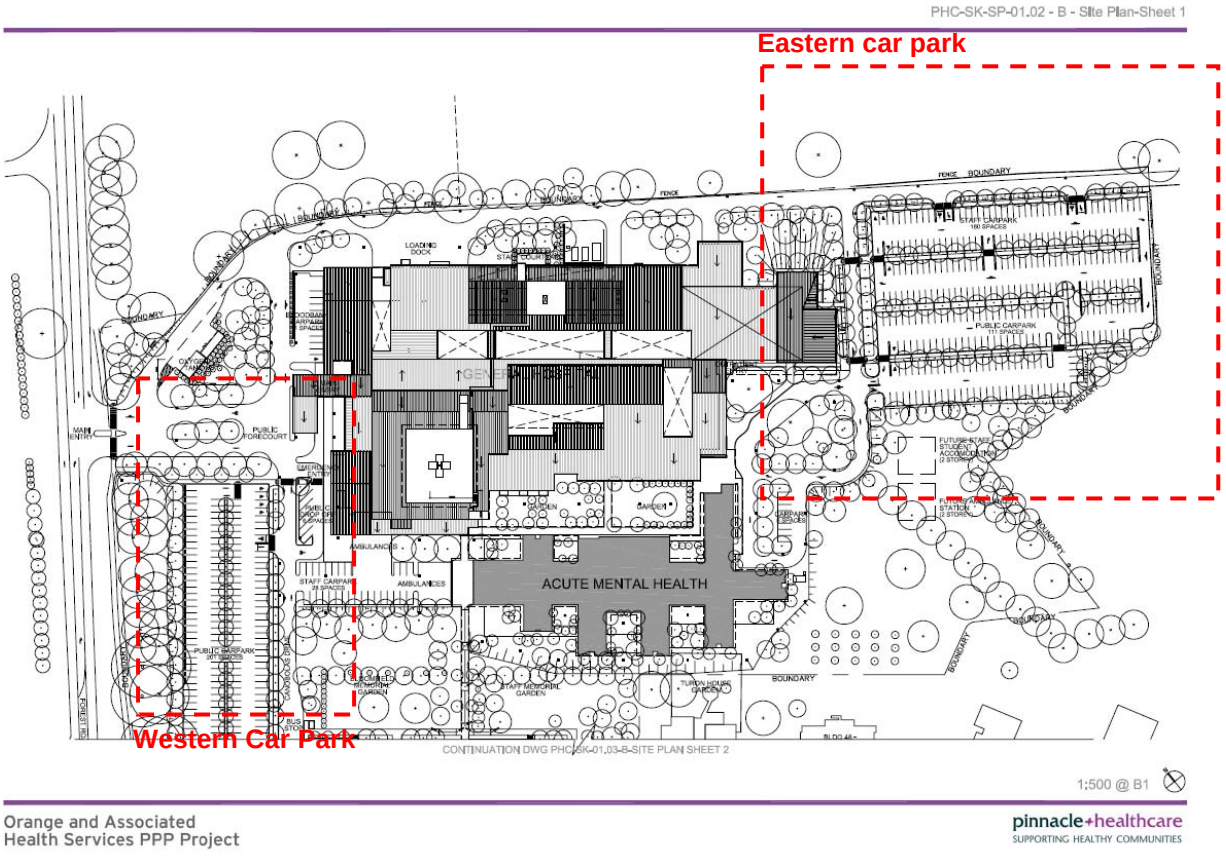


Figure 2: Part Site Plan – Modified Scheme

Footprint:

Hospital planning and clinical operations have been improved during the consultation process with NSW Health, leading to changes and moves in internal departmental arrangements. This has led to an increase in the southern ground floor foot print of the general hospital. This area was already identified as a designated expansion area in the approved scheme. (See Figure 3).

Figure 3: Increased Footprint @ G/F

Designated expansion areas have also been introduced into the scope for the new facilities, which have affected the footprint of the general hospital.
These include:

1) Radiotherapy. (Figure 4)
2) Increased area for Dental Therapy. (figure 5)

The refinements to internal planning have a positive impact on the visual bulk. The building remains a 2½ storey building, but a number of shared services originally on the first floor have been relocated to the ground floor for a better distribution of these services between the levels. The increase in the ground floor footprint is offset by a reduced area at first floor level, resulting in a smaller footprint and improved views from the existing buildings to the south to the adjacent golf course. See architectural drawings SK01.01, SK01.02, SK01.03, and SK-GH-04.01, SK-GH-04.02 for plan and elevations with approved scheme outline shown for reference.

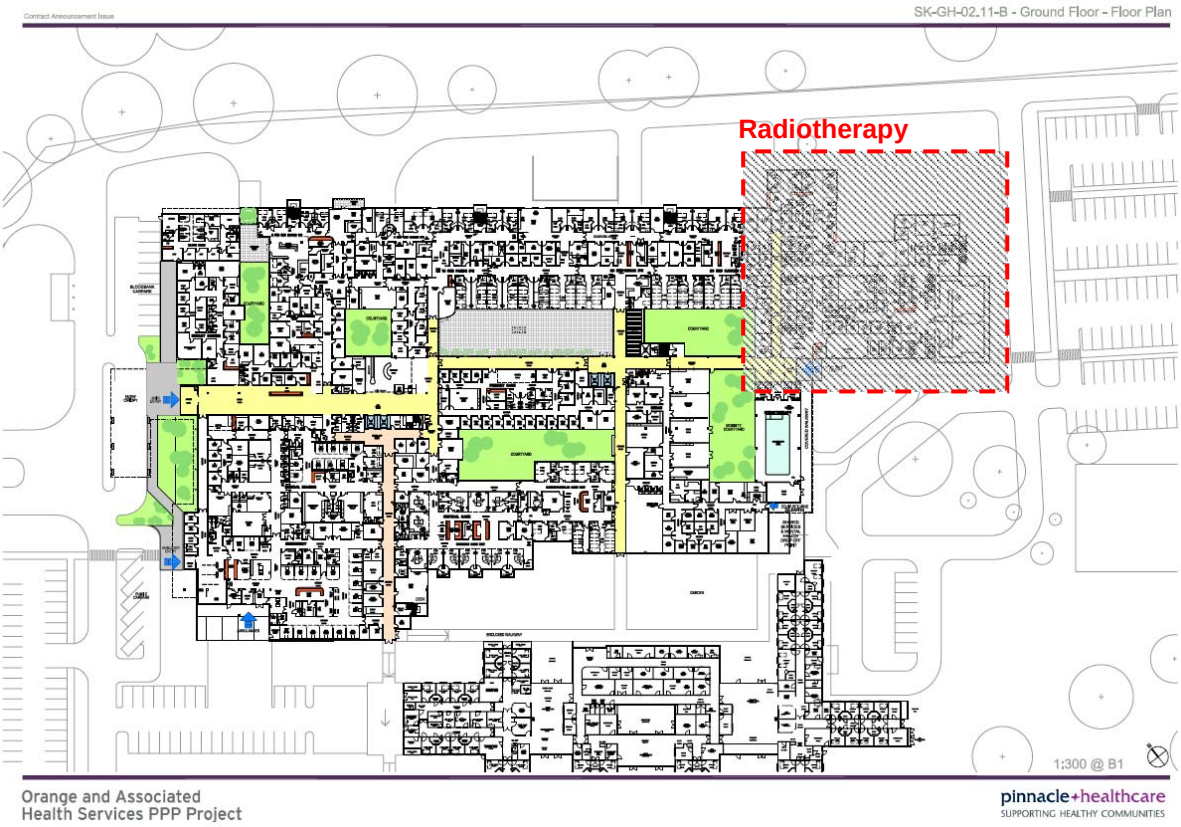


Figure 4: Ground Floor Plan – Modified Scheme

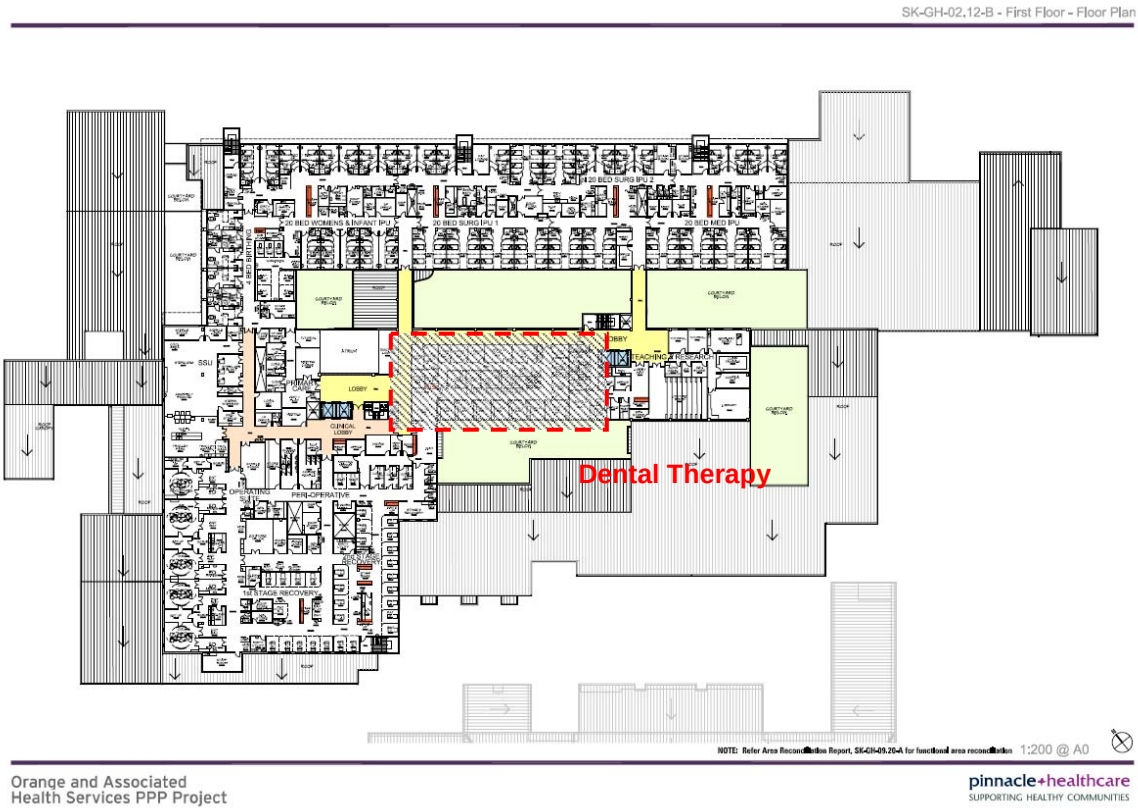


Figure 5: First Floor Plan – Modified Scheme

Landscaping:

Revised landscape drawings have been prepared by landscape architects Taylor Brammer Pty Ltd which incorporate the principles of the previous landscaping drawings into the revised scheme (See Appendix B). Heritage consultant David Scobie has consulted with Taylor Brammer to ensure amendments have been made to comply with the Conditions under B2 of the Project Approval 06-0111. These changes are described below and outlined in figures 7-8.

1) Screen plating to the adjacent golf course.
   As to comply with Part 3A consent Condition C4 (d)
2) New landscaping arrangement to the east of the general hospital.
   As to suit new carparking and vehicular access arrangements.
3) New landscaping arrangement to heritage garden cartilage.
   As to comply with Part 3A Consent Condition B2 (e)
4) New landscaping arrangement to surrounds of FMH, derived from changes in clinical planning arrangements and building form.

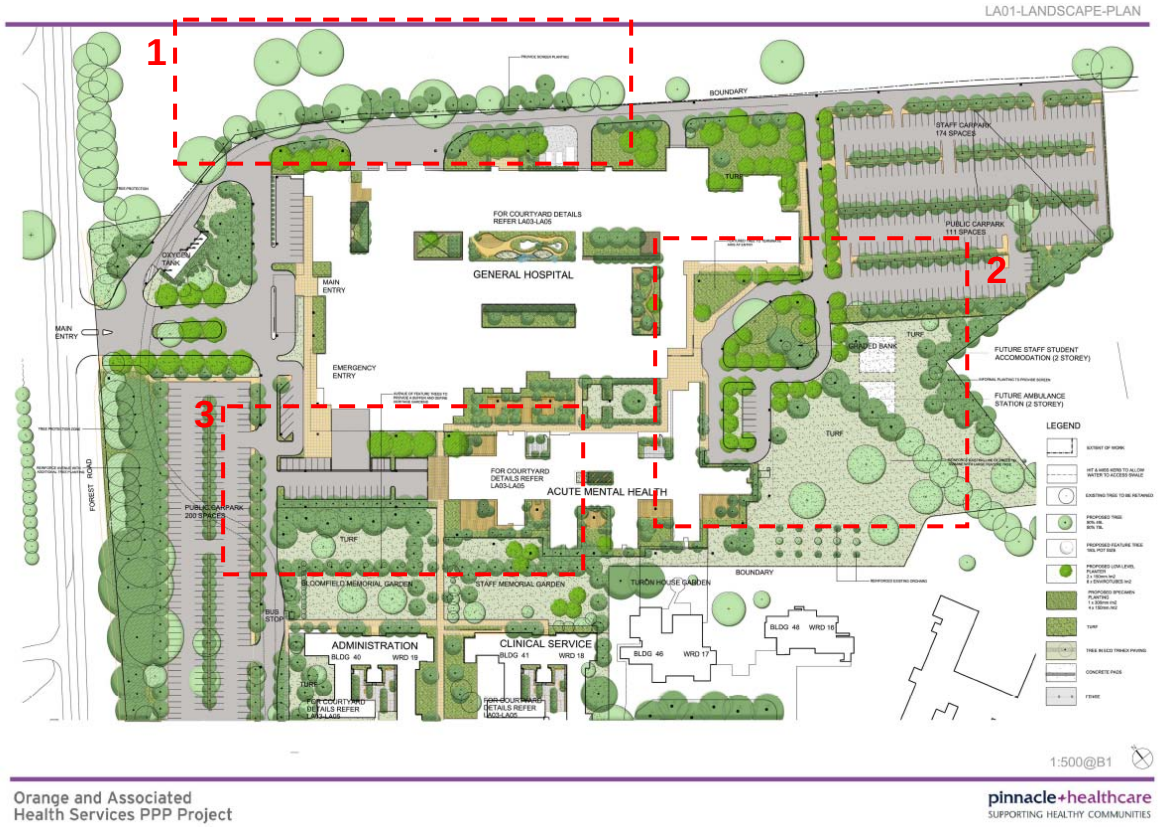


Figure 7: Part Landscape Plan

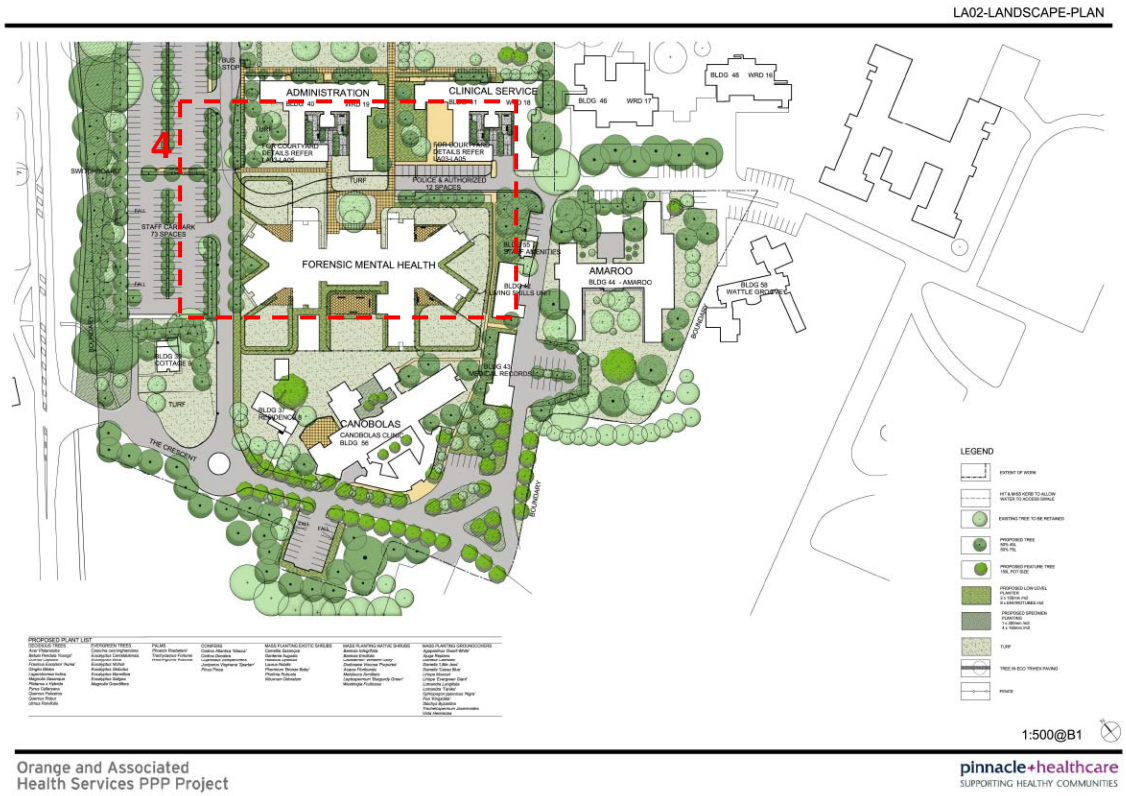


Figure 8: Part Landscape Plan

Vehicular/Pedestrian movement:

Overall, the pedestrian and vehicular movement throughout the site has remained consistent with the approved scheme, with major public and staff footpaths, and points of access being retained. However, some areas have been revised through alterations of car parking arrangements as stated above, to improve pedestrian movement and safety and as to comply with Conditions B5 of the Project Approval. These changes are described below and outlined in figures 9-10.

1) Pedestrian access: Western car park to General Hospital main entry.
   As to comply with Part 3A consent condition B5 (d) (e)
2) Pedestrian access: eastern Car park to General Hospital Outpatient's entry.
   As to suit new car parking arrangements and ensure safe access from the carpark to the hospital enty.
3) Vehicular access: Main campus entry, blood bank parking and service road.
   As to comply with Part 3A consent condition B5 (f)
4) Vehicular access: Outpatients drop off and Acute Mental Health secure drop off.
   To suit adjusted internal clinical arrangements of AMH secure entry, and improve the flow of emergency, staff and public vehicles in this area of the site.

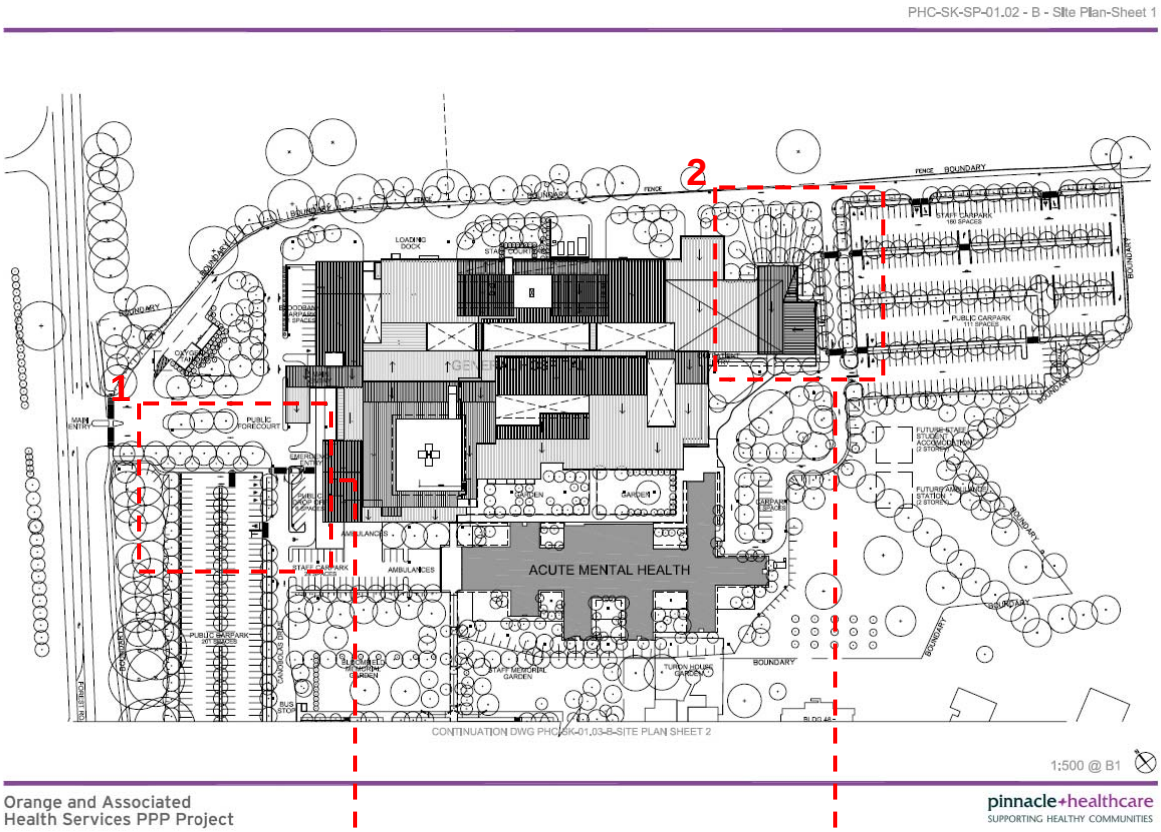
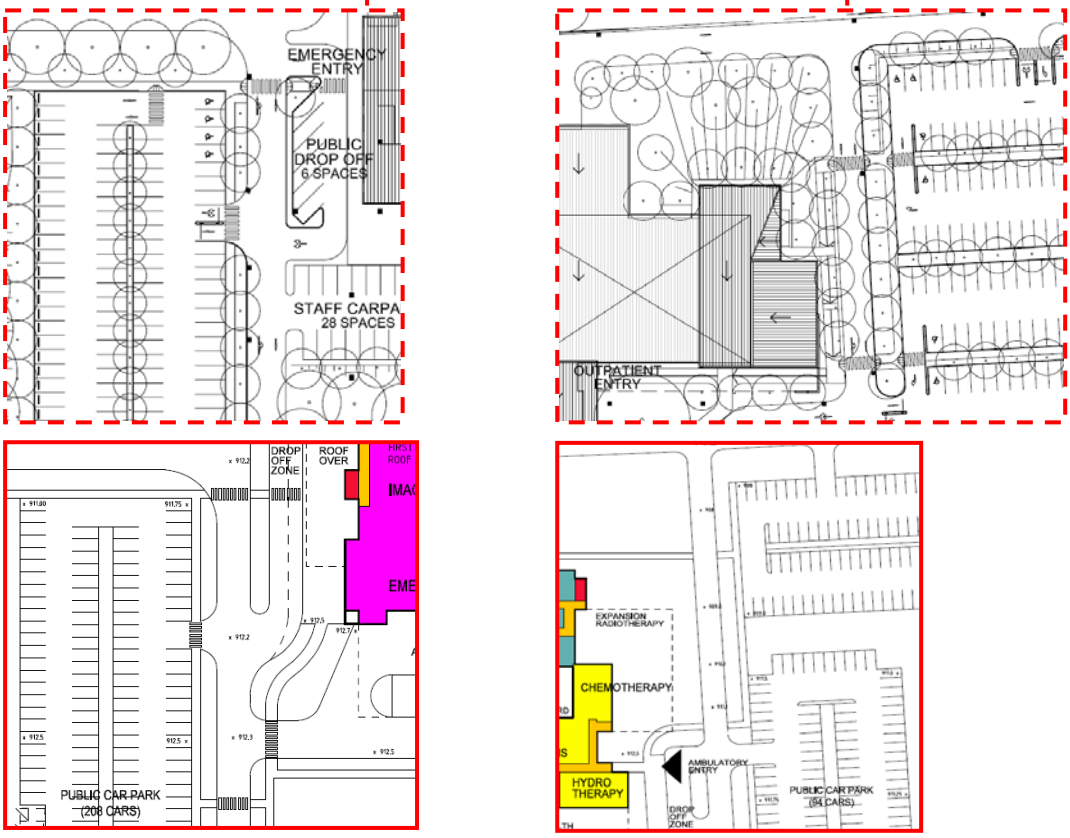


Figure 9: Part Site Plan



- Modified Scheme **- Approved Scheme**

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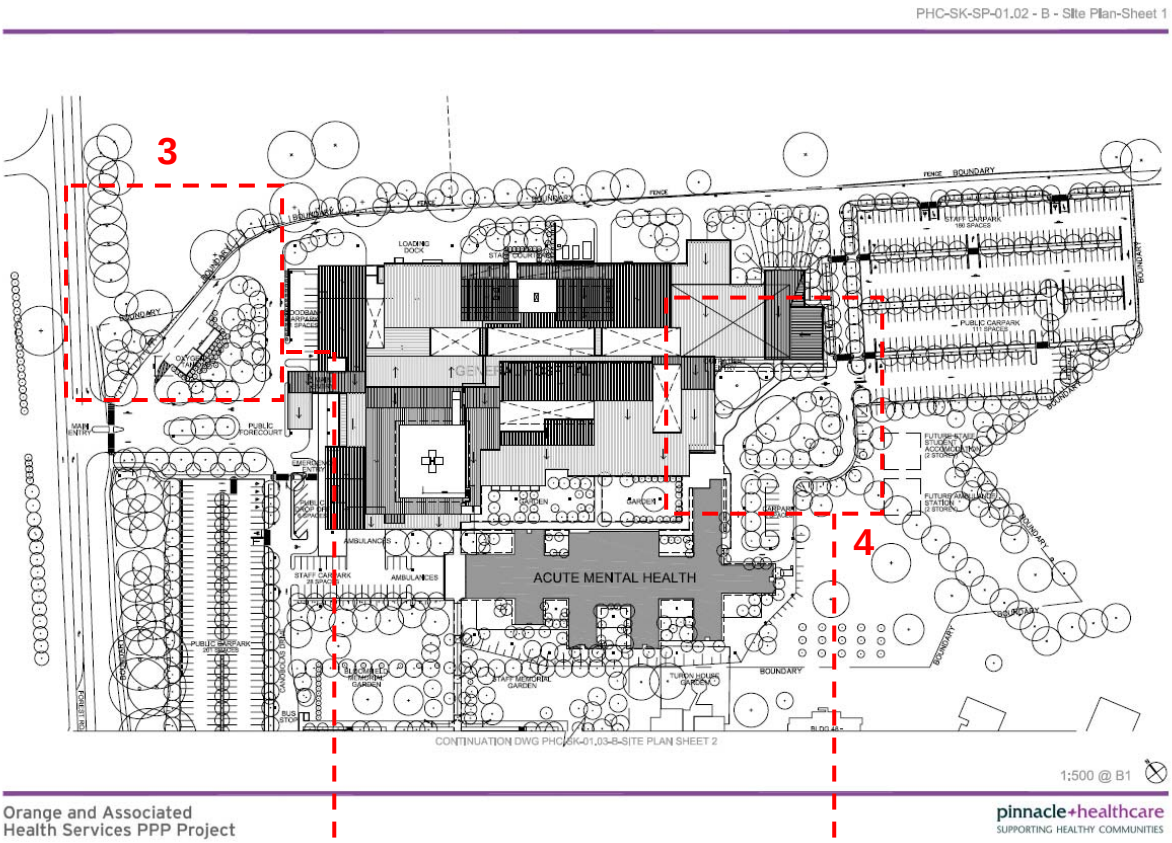
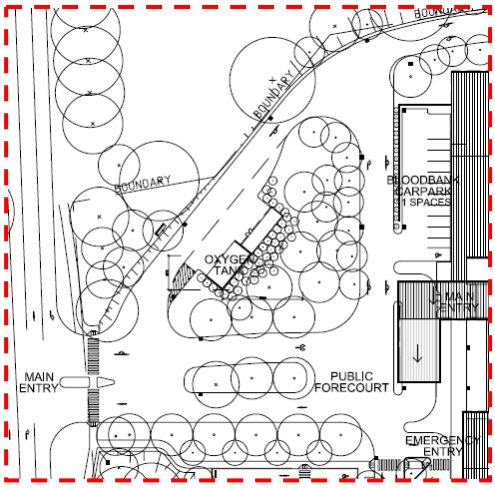
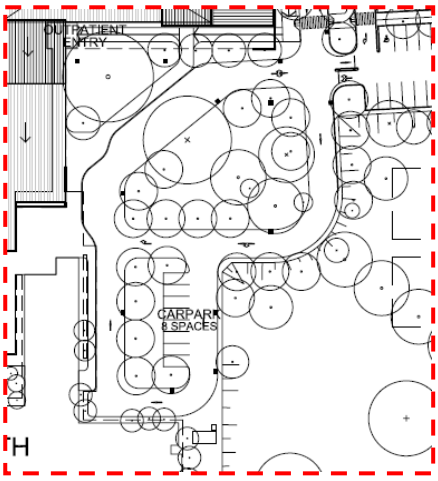
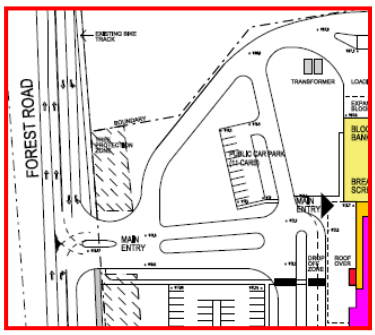
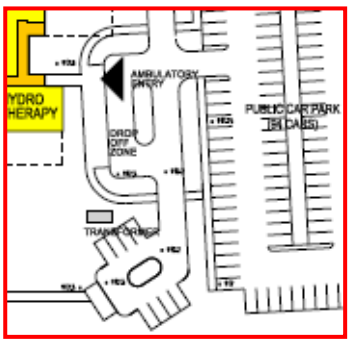


Figure 10: Part Site Plan









- Modified scheme **- Approved scheme**

Architectural expression:

The visual aesthetic of all new buildings on site have been enhanced to reflect an appropriate architecture of new changes in planning, heritage issues, siting and ESD principles.
Through consultation with our Heritage consultant, an appropriate heritage principle has been developed to strengthen the new buildings relationship and connection with the surrounding existing buildings. A series of 'heritage panels' of a modern construction typology, picking up on the scale and colour of existing bricks on site, strengthen the buildings' façade at ground floor, with a clear datum created relating to the floor level of the existing ward18/19 buildings.

The lower ground floor takes on a simple role of a dark, quiet and monolithic platform, which is appropriate to the floor's role of accommodating the building's 'back of house' departments and services, from which the heritage panels and floors above protrude, pronouncing the colours and modern materials off a dark secondary base element. The first floor compliments the heritage panels by stepping back from the line of the heritage panels, and through change of colour and material scale, assists in pronouncing and strengthening the colours of these panels.

The three entries to the hospital, Main entry, Emergency and Outpatients (See architectural drawing SK01.01 Master Plan in Appendix A) are pronounced through change in material, with high quality finishes utilised in these areas of the building to pronounce entries and directing visitors and patients to the relevant area of the hospital. Heritage panels acting as screen walls, also highlight entry points, leading patients and visitors towards the building, along covered walkways or canopies.

Both AMH and FMH respond similarly to the general hospital in regards to its architectural language and heritage principles. The masonry base, a continuation of the heritage 'datum' and colour is a continuous theme. The use of pre-finished, hard wearing materials such as vitrapanel replaces metal cladding for patient safety and security issues.

The roof forms of all buildings are enhanced from the approved scheme to continue the ideas carried through the facades and architecture. Skillion style rooves float above the building, leading the eye line past the mass of the general hospital onto existing vistas beyond to the north and east. The low level rooves retain views from the existing building to the south, whilst also strengthening the roof forms and allowing sunlight to enter through the various courtyards throughout the buildings.

Heritage:

Through consultation with heritage consultant, David Scobie, and the NSW Heritage Office, key areas of the site and existing buildings have been considered in the new scheme. The proposed buildings and site works respect the heritage significance of the site and where possible, have retained many of the key heritage aspects of the site. The existing articulation of Canobolas drive has been expressed and interpreted through concrete strips set into the ground with indicative signage to visually express the original condition of the site. Interpretation has also been provided for the existing building 20, TB ward to be demolished.

Through consultation with the NSW Heritage office, several key areas of the design have been improved to further strengthen the relationship of the new buildings and existing heritage elements. Finishes to the SW corner of the general hospital have been amended to strengthen the visual relationship between the 'heritage panels' and existing heritage buildings, wards 18 and 19, whilst the overall design has considered and referred to the NSW Heritage 'Designing in Context' guidelines.

Materials in the enclosed and covered walkways have been selected to relate the materials of street furniture throughout orange city. The use of infill timber panels at changes of direction and nodal points expresses this relationship, whilst assisting with way finding throughout the hospital campus.

These and other heritage aspects of the site have been considered, and outlined in the attached heritage Impact Statement prepared by David Scobie Architects. (See Appendix C)

Major heritage issues and respective heritage strategies are described below and listed in Figures 11-16.

1) Heritage garden Curtilage. As to comply with Part 3A consent condition B2 (e)
2) Relocation of existing sunken greenhouse.
   As to comply with Part 3A consent condition B2 (f)
3) Concrete strip outline of existing ward 20 building to be demolished
4) Concrete strip outline of existing Canobolas drive.
5) SW corner of General Hospital
   As per comments through consultation with NSW Heritage office.

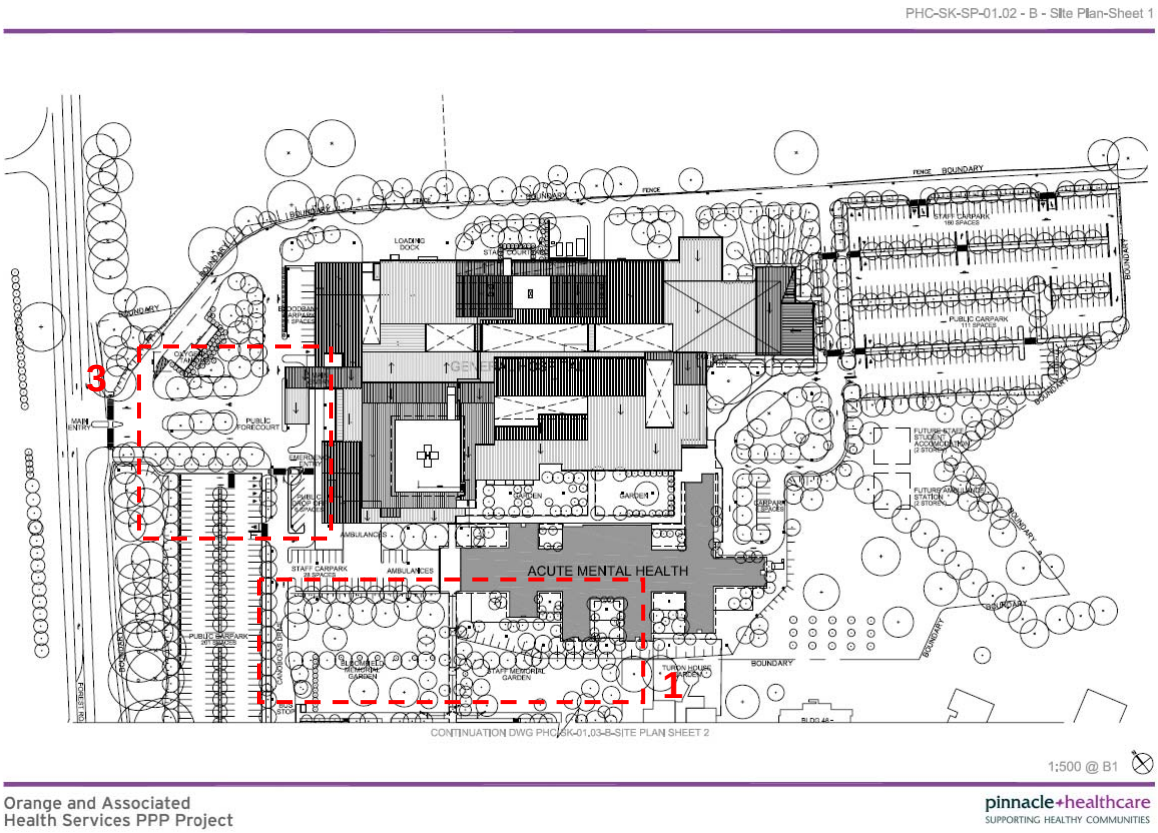


Figure 11: Part Site Plan – Location of heritage items

1- Figure 12

3 – Figure 13

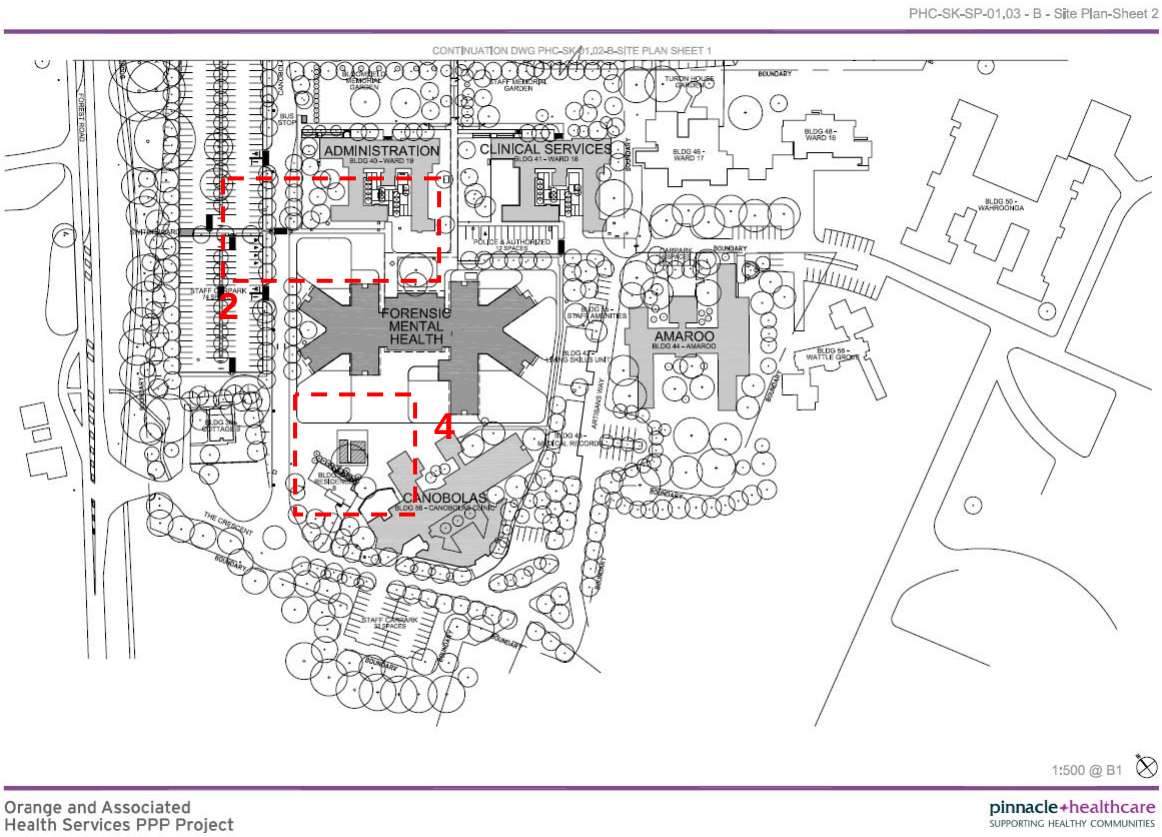
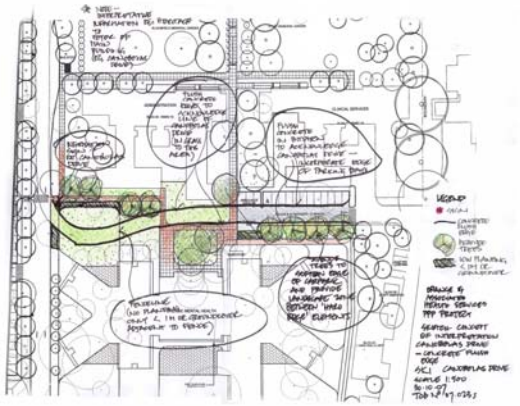


Figure 14: Part Site Plan – Location of heritage items



2 – Figure 15

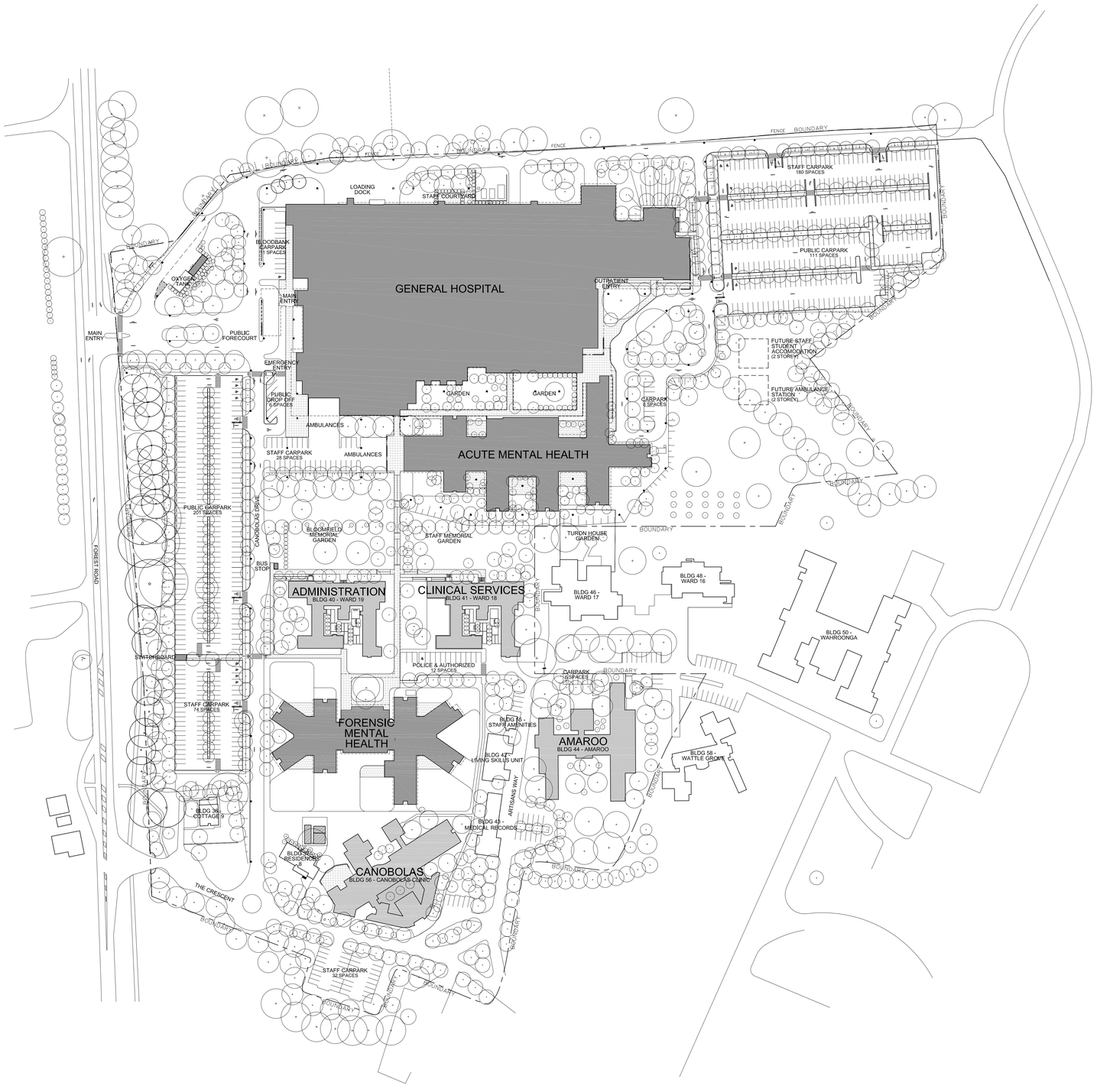
4 – Figure 16

Environmentally Sustainable Design (ESD):

Strong ESD initiatives in architectural design and services have been introduced to reduce energy consumption within the buildings, and also to recognise the need to passively control sunlight and climate in the region. Sun shading structures provides passive sun protection, whilst courtyards and light wells allow natural light to enter the building in a controlled manner, improving the environment for patients, visitors and staff within the building.

Please refer to Appendix D, outlining the ESD principles and strategies introduced.

Appendix A



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Orange and Associated
Health Services PPP Project

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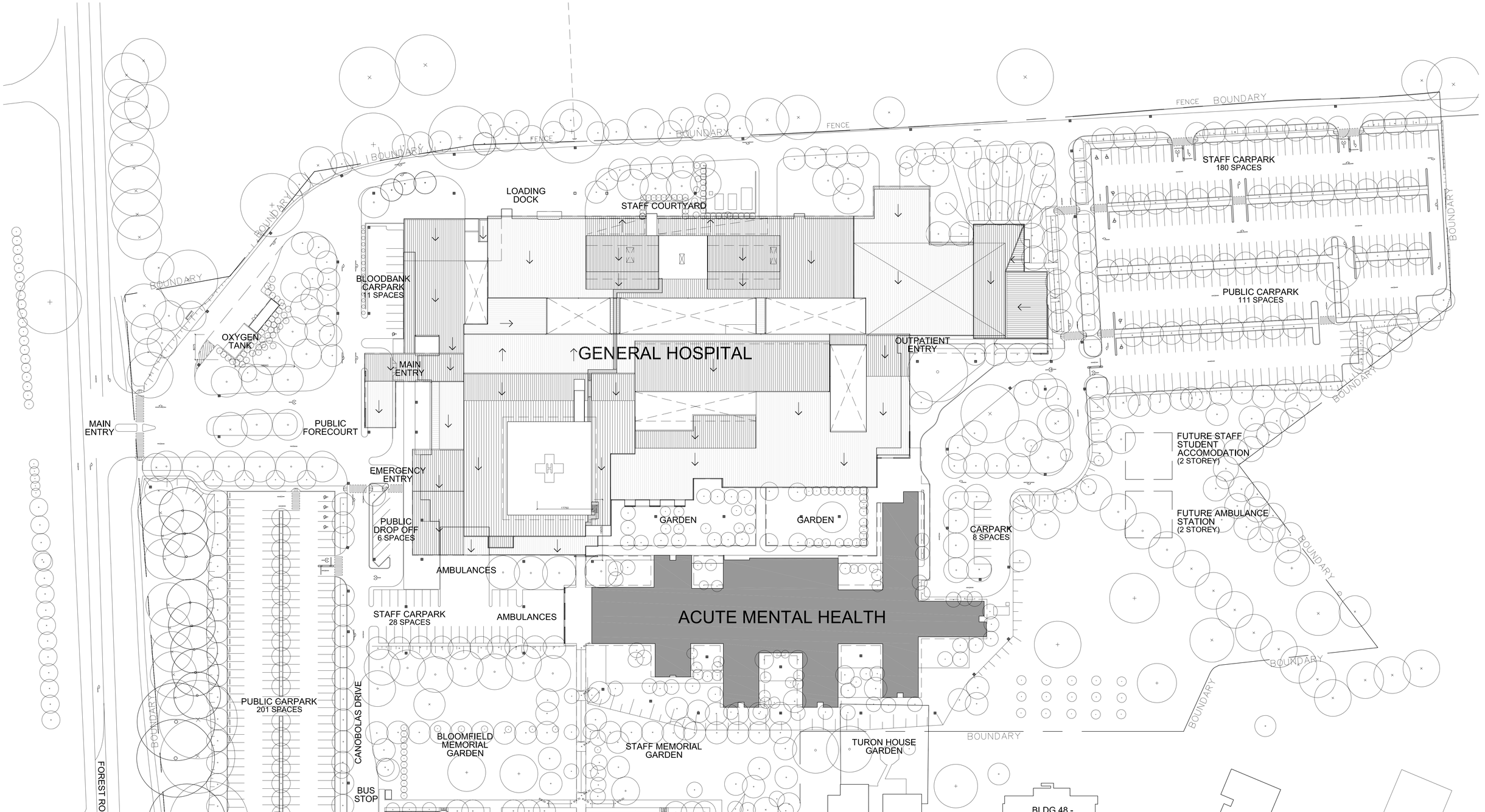

CONTINUATION DWG PHC-SK-01.03-B-SITE PLAN SHEET 2

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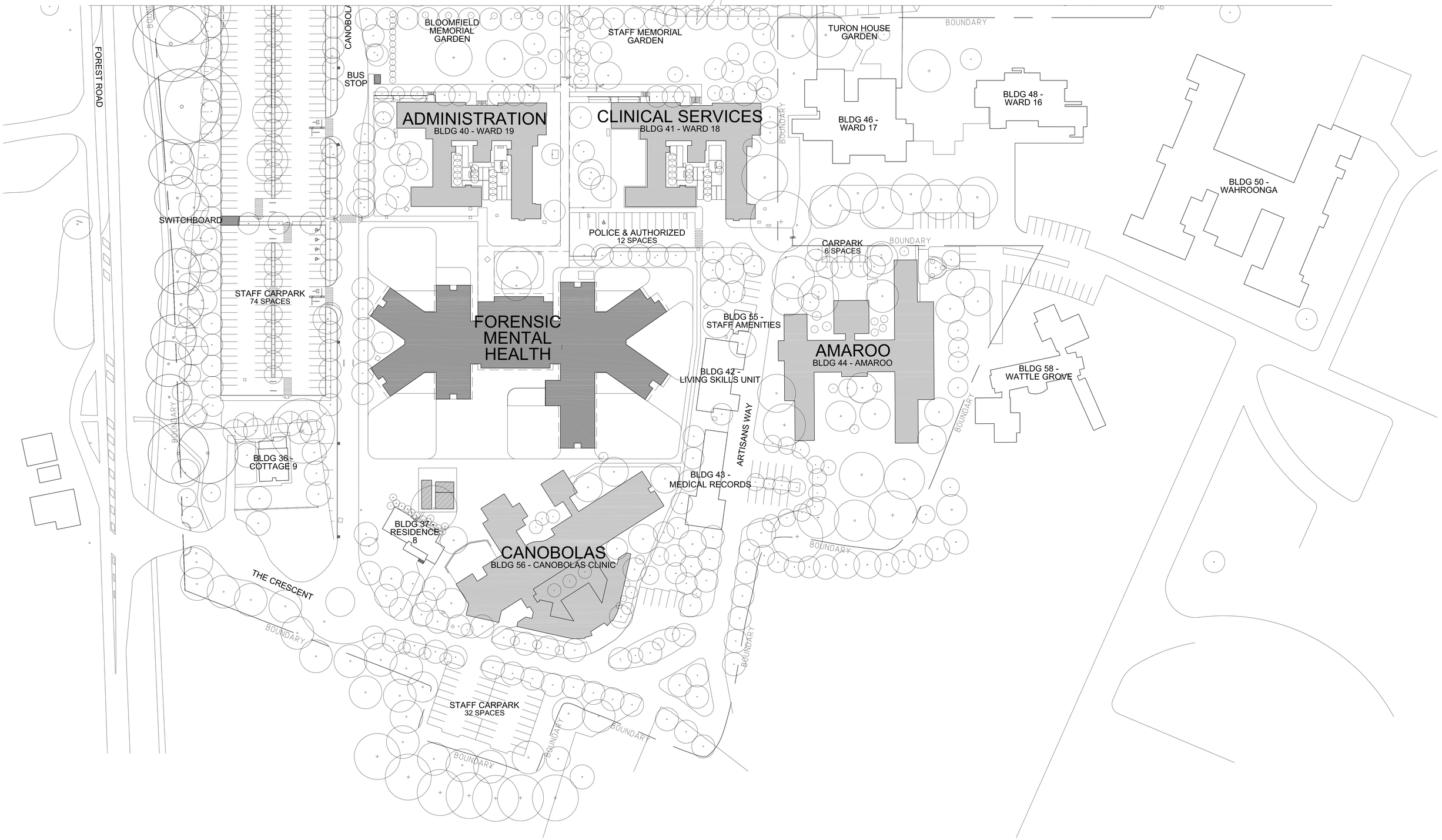
CONTINUATION DWG PHC-SK-01.02-B-SITE PLAN SHEET 1



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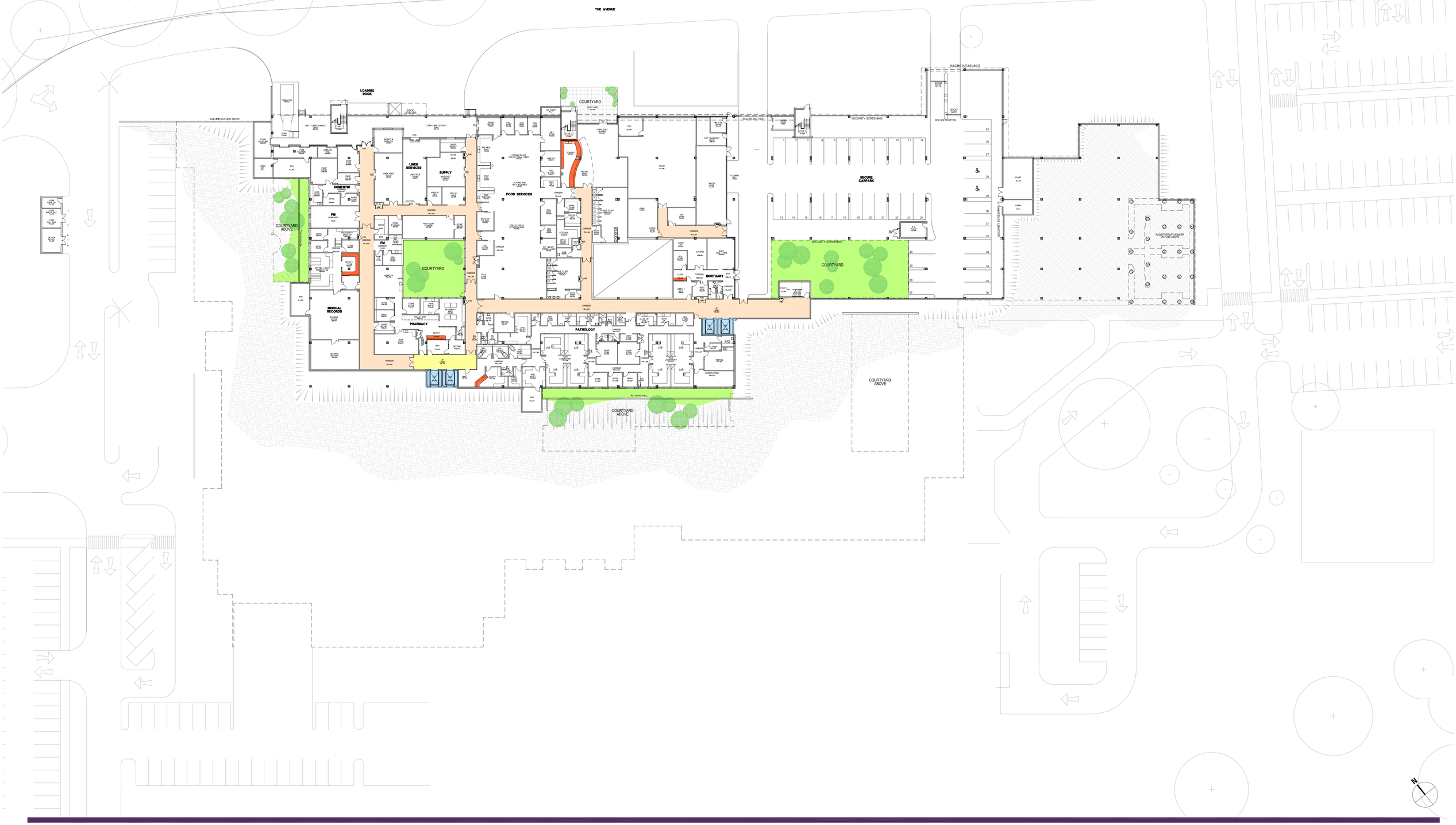

Orange and Associated
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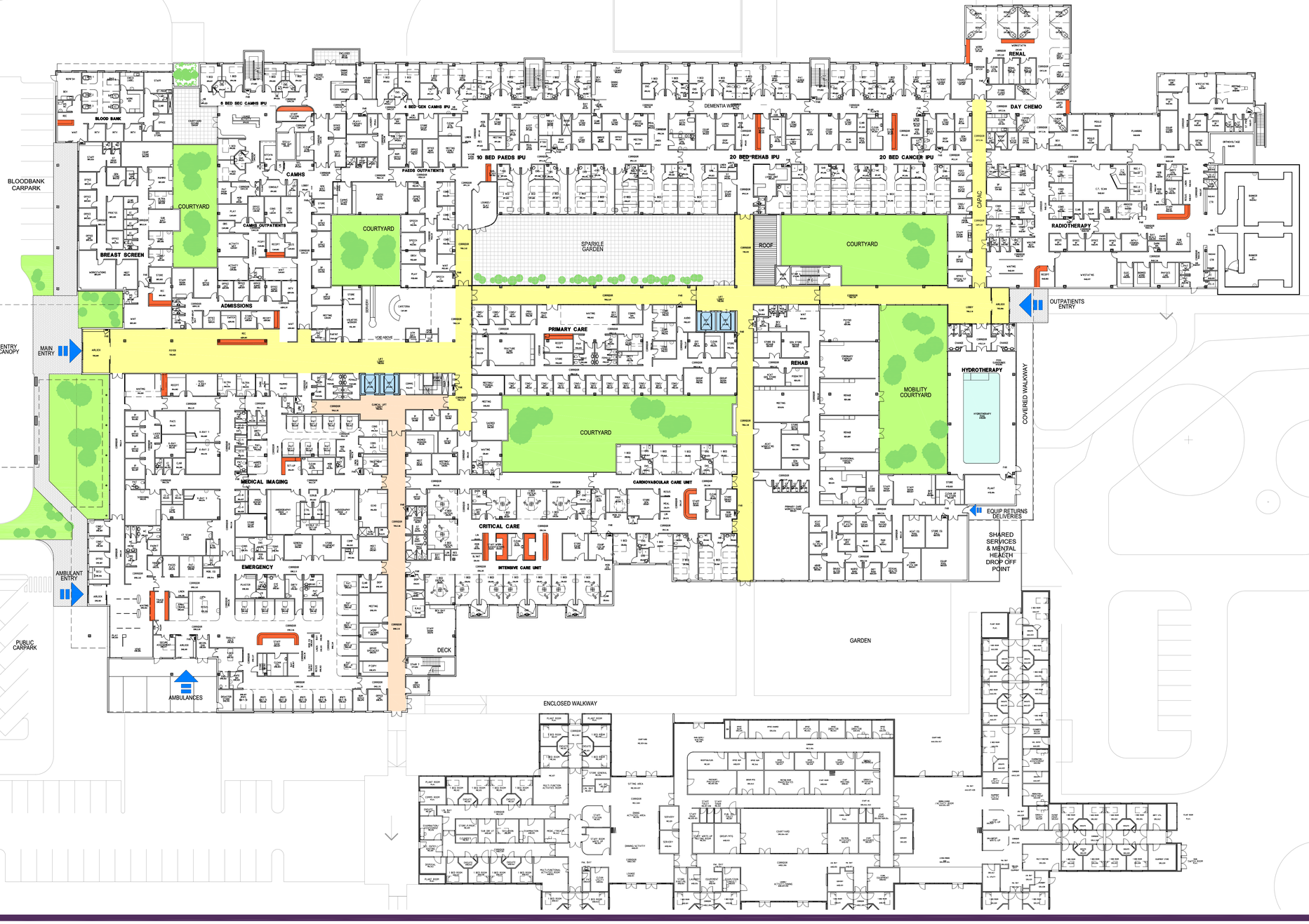
SK-GH-02.11-B - Ground Floor - Floor Plan



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Orange and Associated
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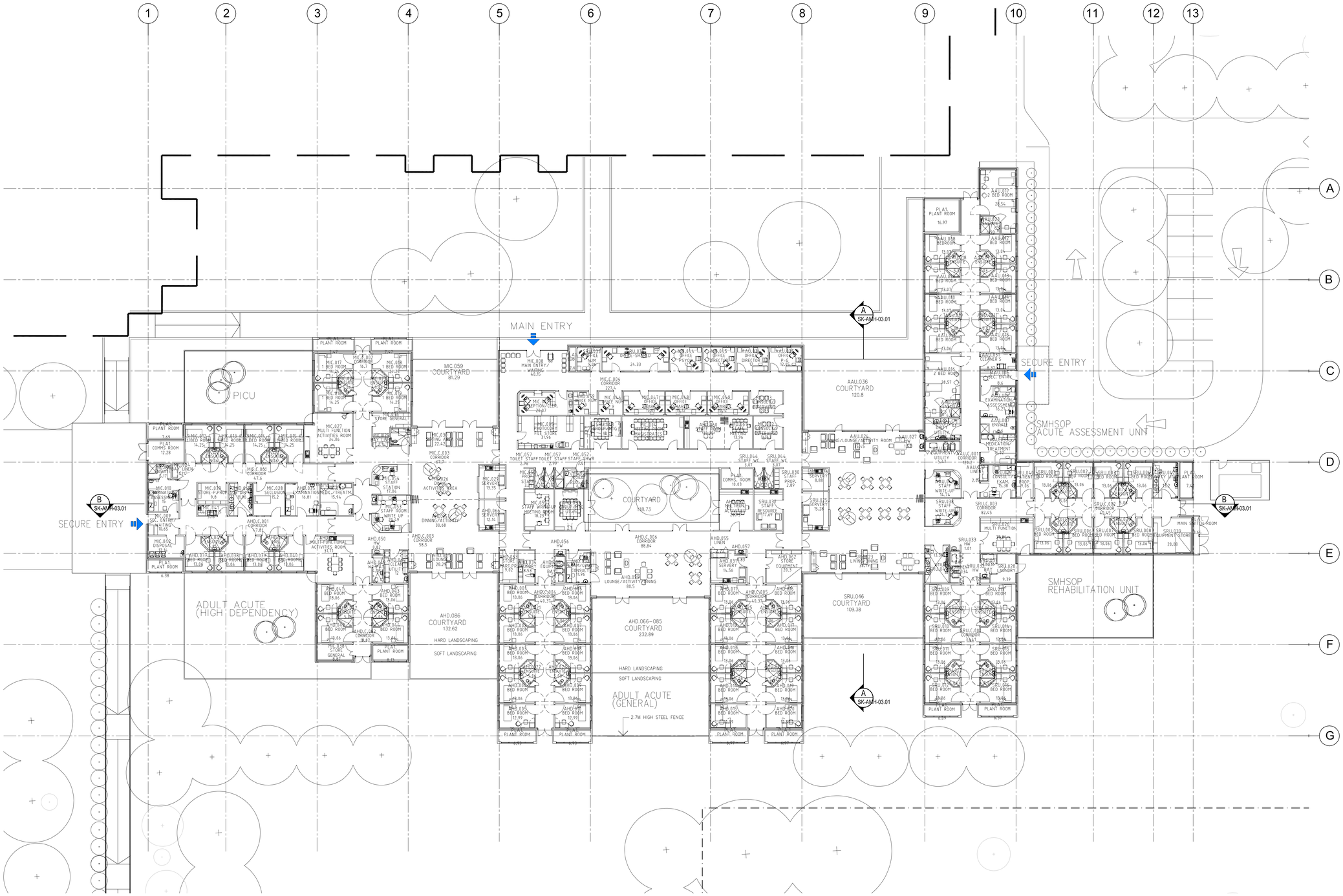
LANDSCAPING BELOW
PARAPET WALL TOW 916.90
METAL DECK ROOF BELOW
RL 922.95
RL 918.97
3° FALL
SECURE COURTYARD BELOW
1° FALL
COURTYARD BELOW
CONCRETE ROOF
FSL 916.90
DPS
DP
RL 919.05
6° FALL
ENTRY CANOPY
TOW : RL 916.15
PARAPET WALL
BOX GUTTER
RL 924.465
5° FALL
LIFT SHAFT
SAFETY NET SHOWN DASHED
PLANT ROOM UNDER HELIPAD
H
RL 925.00
EXTENT OF PLANT ROOM UNDER SHOWN DASHED
SLAB BELOW TO OPEN PLANT ROOM
RL 922.85
RL 925.05
FSL 921.1
18° FALL
PLANT ROOM ENCLOSURE METAL DECK ROOF
OPEN PERFORATED STEEL ACCESS WALKWAY
METAL CLAD PARAPET W/ METAL DECK ROOF BEHIND
METAL DECK ROOF @ 3° FALL
ROOF TO STAIR BELOW
OPEN STEEL ACCESS STAIR
PERFORATED STEEL OPEN ACCESSWAY
CONCRETE ROOF OVER FIRESTAIR
RL 922.45
BUILDING LINE BELOW SHOWN DASHED
RL 918.99
RL 918.45
METAL CLAD PARAPET W/ METAL DECK ROOF BEHIND
EXTENT OF CONCRETE SLAB UNDER FOR FUTURE EXPANSION
METAL DECK ROOF @ 1° FALL
TOW: RL 917.160
METAL CLADDING TO FASCIA (MC2 TYP.)
PARAPET WALL
TOW: RL 918.790
RL 918.25
RL 917.565
METAL CLADDING TO FASCIA
COVERED WALKWAY
BUILDING LINE BELOW SHOWN DASHED
RL 917.645
RL 916.665
RL 919.653
4° FALL
10° FALL
HALF ROUND METAL GUTTER

1:200 @ A0



NOTE: REFER AREA RECONCILIATION REPORT FOR FUNCTIONAL AREA RECONCILIATION

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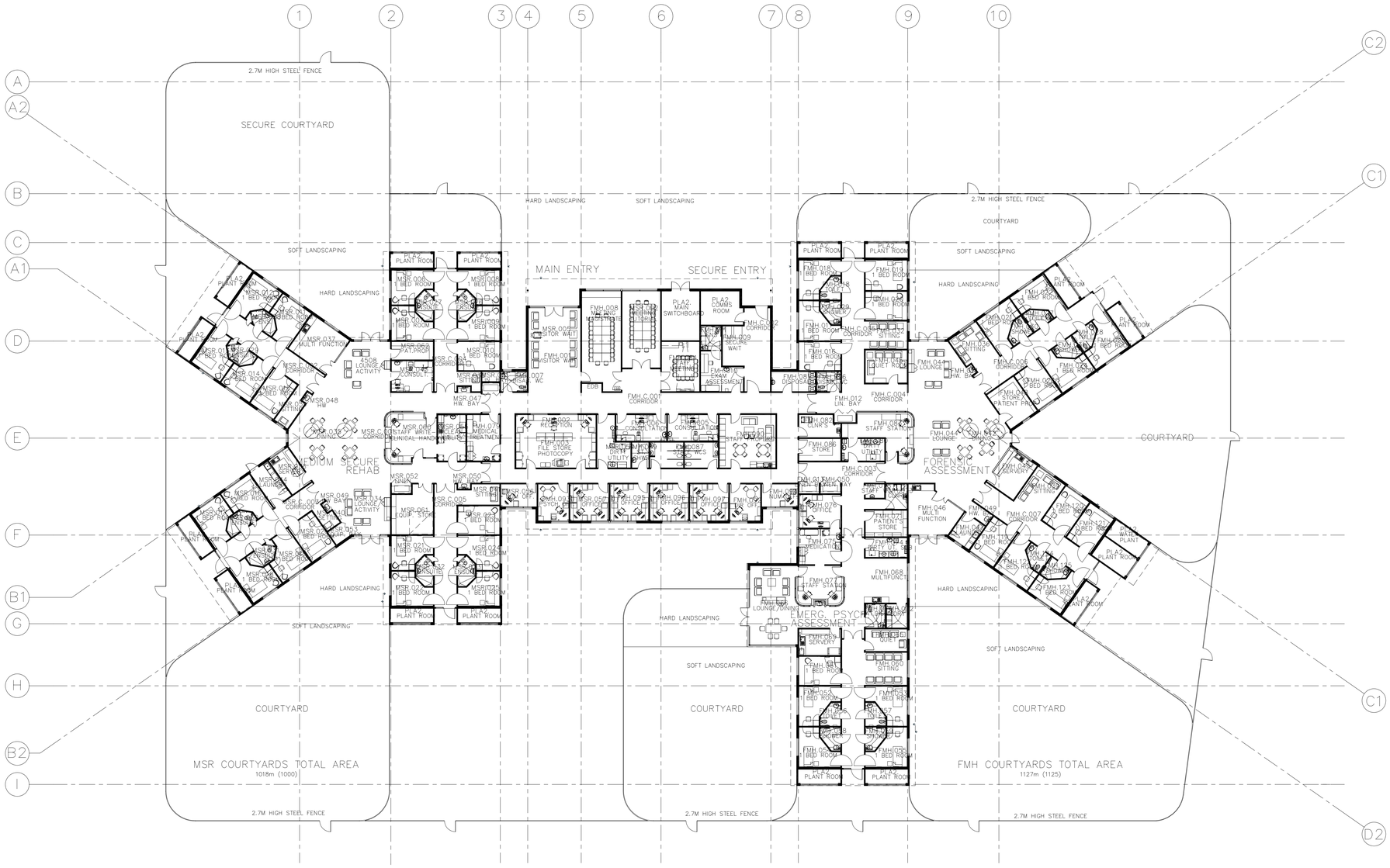

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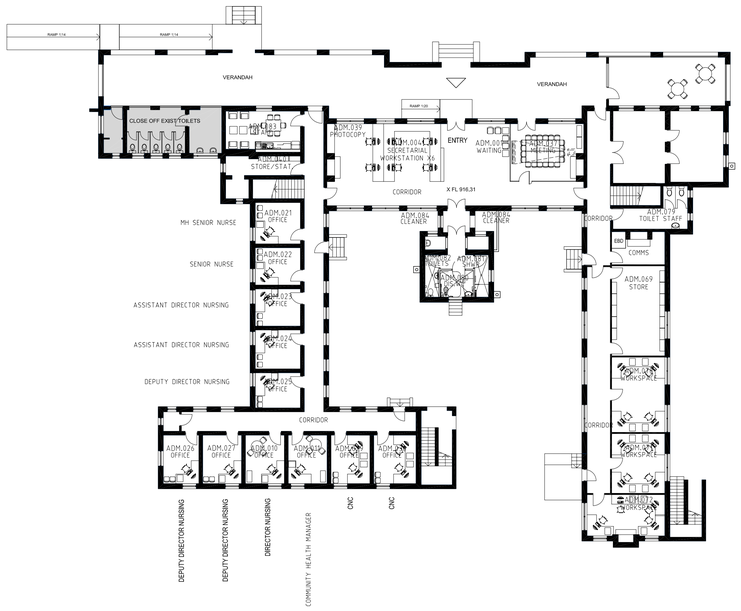
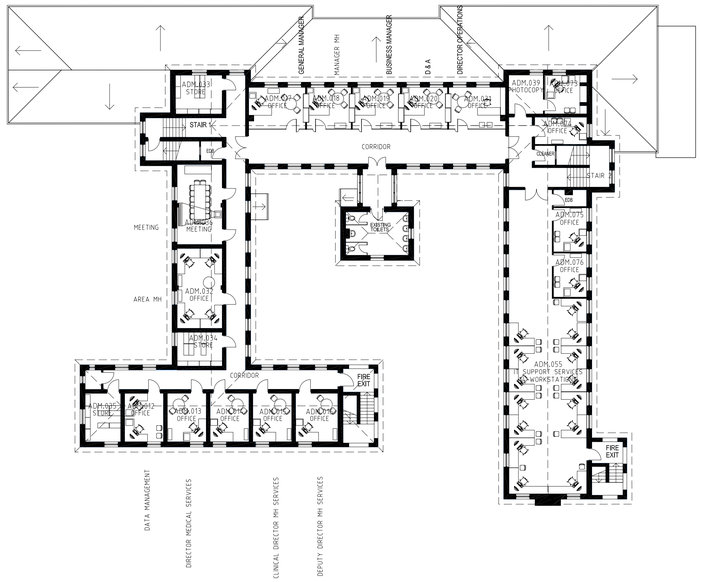


GROUND FLOOR PLAN



FIRST FLOOR PLAN

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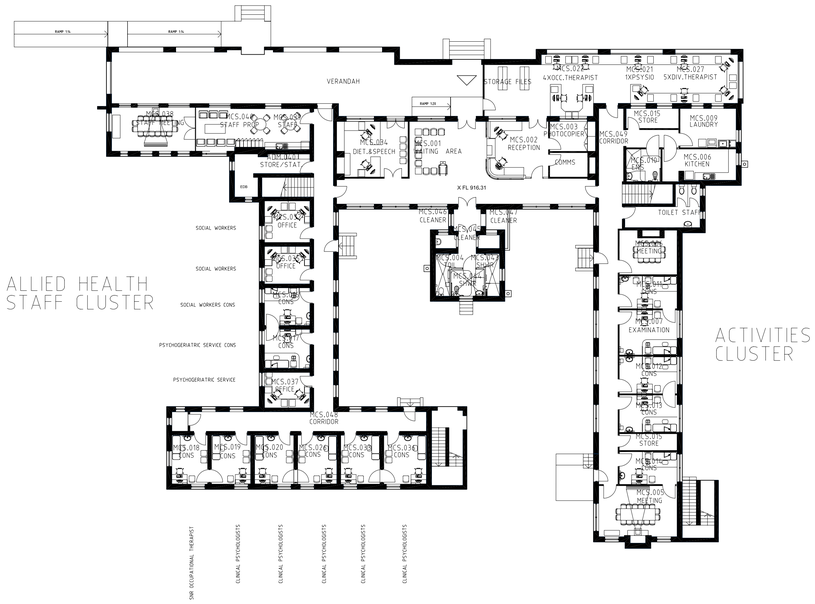
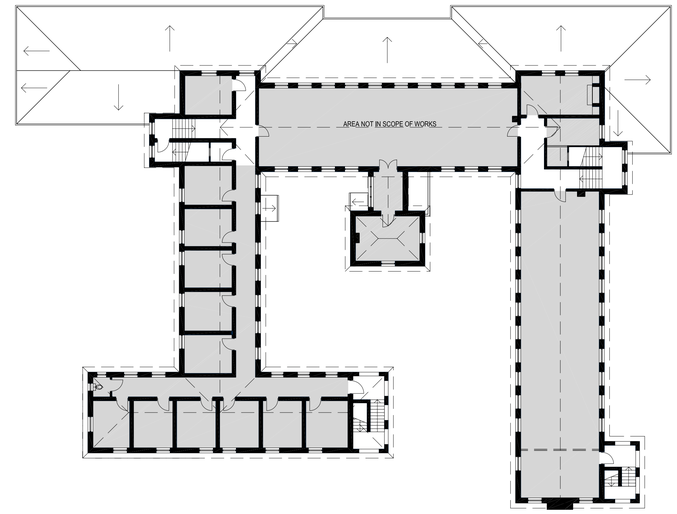


GROUND FLOOR PLAN
MENTAL HEALTH CLINICAL SUPPORT



FIRST FLOOR PLAN
MENTAL HEALTH CLINICAL SUPPORT

NOTE: REFER AREA RECONCILIATION REPORT FOR FUNCTIONAL AREA RECONCILIATION

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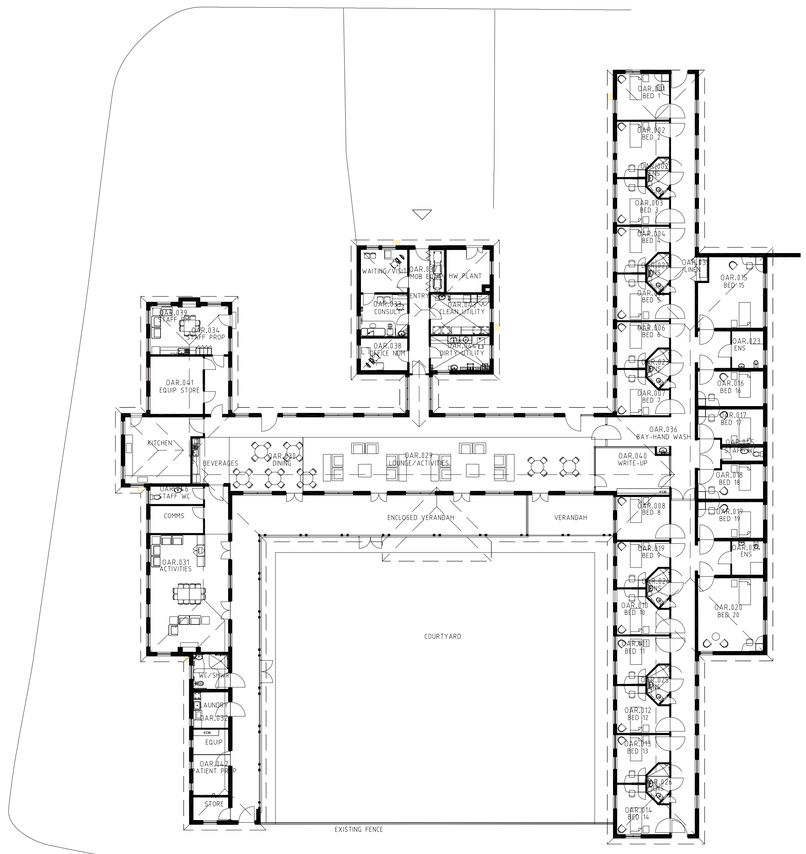
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OAR.026 ENS
OAR.027 ENS
OAR.028 ENS
OAR.029 ENS
OAR.030 ENS
OAR.031 ACTIVITIES
OAR.032 DINING
OAR.033 STAFF PROP
OAR.034 CONSULT
OAR.035 CLEAN UTILITY
OAR.036 BAY-HAND WASH
OAR.037 DIRTY UTILITY
OAR.038 STAFF WC
OAR.039 SLUICE ROOM
OAR.040 PATIENT PROP
OAR.041 EQUIP STORE
OAR.042 STORE
OAR.043 EQUIP
OAR.044 LAUNDRY
OAR.045 WC/SHWR
OAR.046 WAITING / VISITORS
OAR.047 MOB LOUNGE
OAR.048 HW PLANT
OAR.049 WRITE-UP
OAR.050 STAFF WC
OAR.051 STAFF WC
OAR.052 STAFF WC
OAR.053 STAFF WC
OAR.054 STAFF WC
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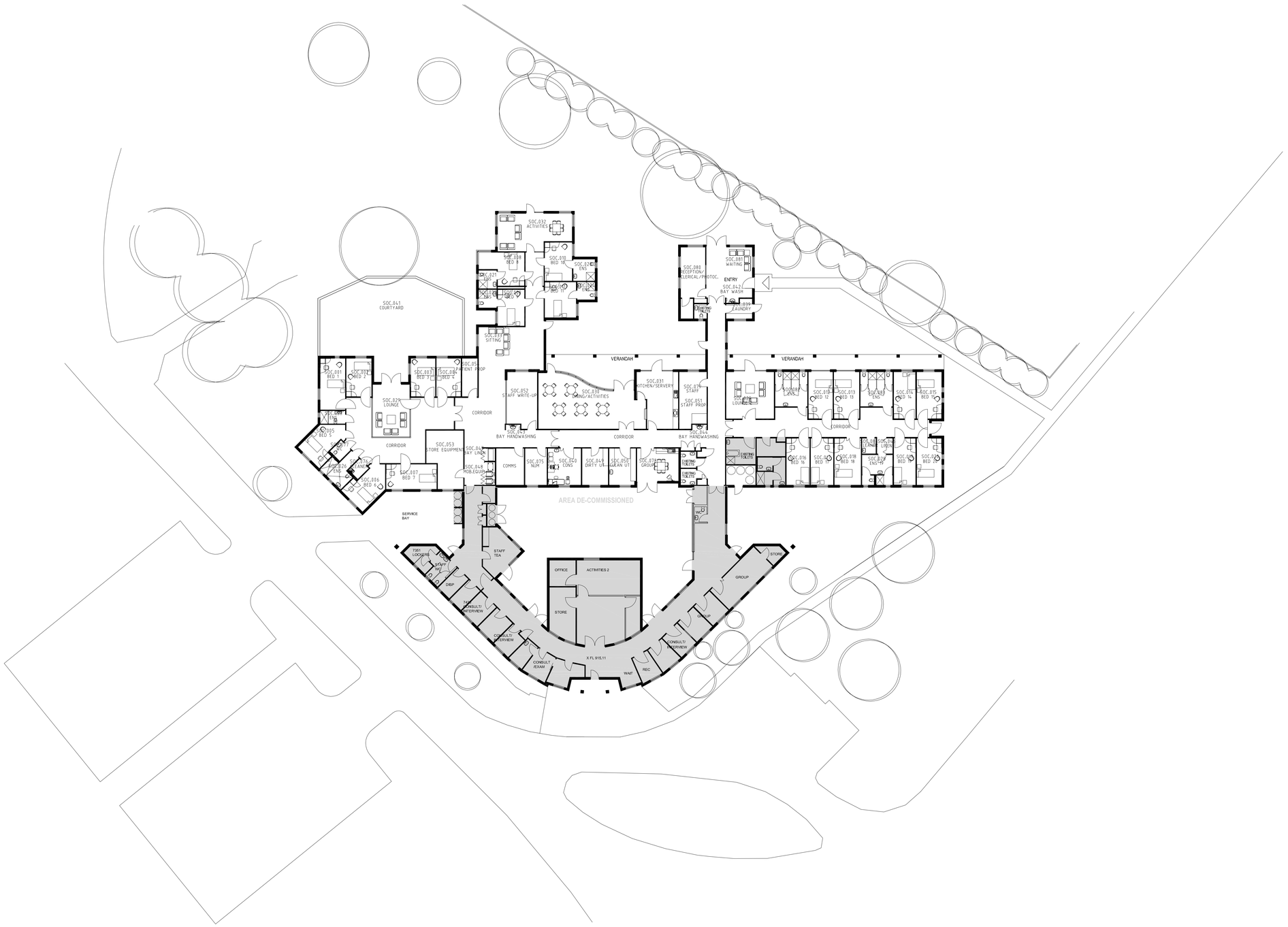
OAR.061 STAFF WC
OAR.062 STAFF WC

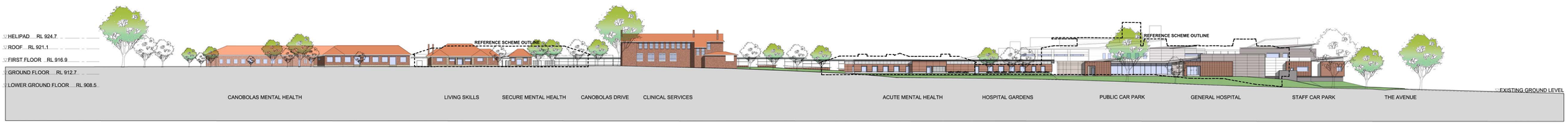


NOTE: REFER AREA RECONCILIATION REPORT FOR FUNCTIONAL AREA RECONCILIATION

1:200 @ B1

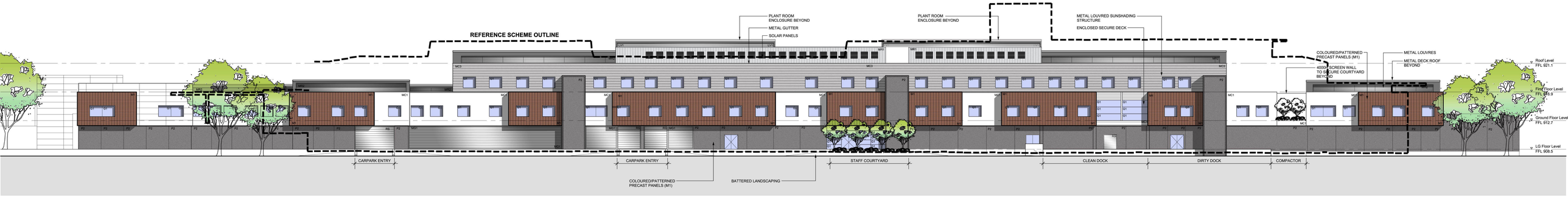
ELEVATION WEST

ELEVATION NORTH

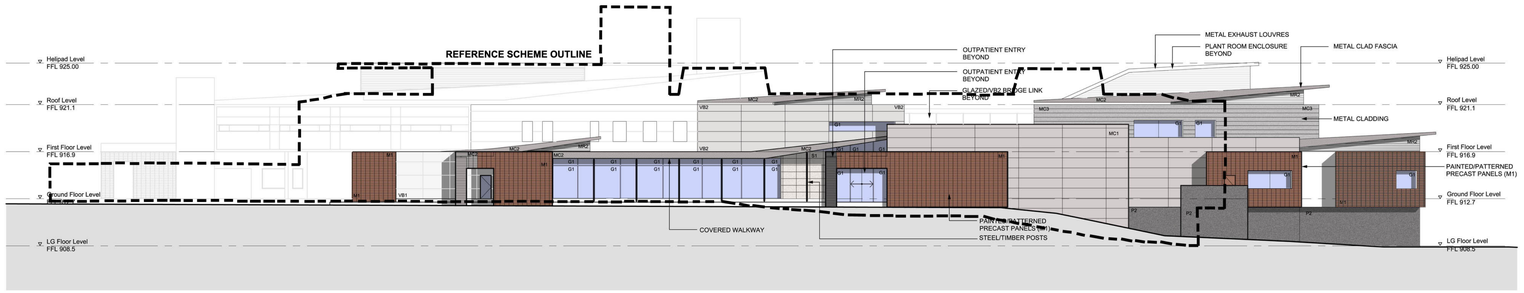


ELEVATION EAST

1:500 @ A0



ELEVATION NORTH

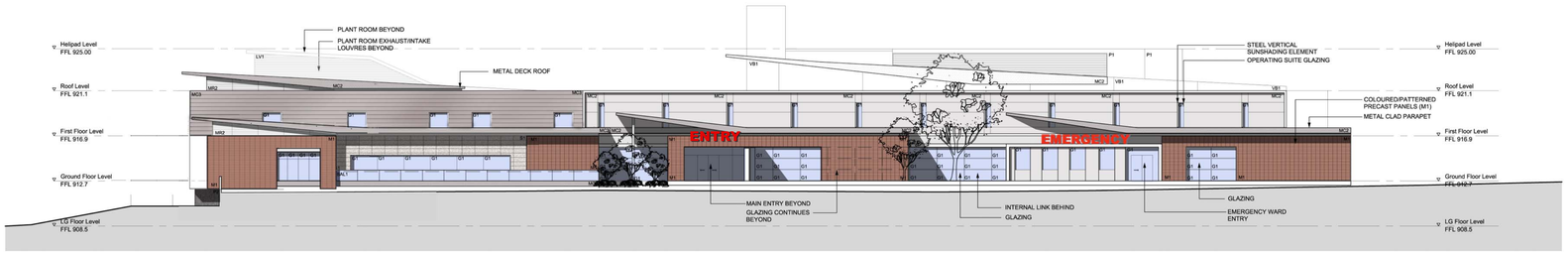


ELEVATION EAST

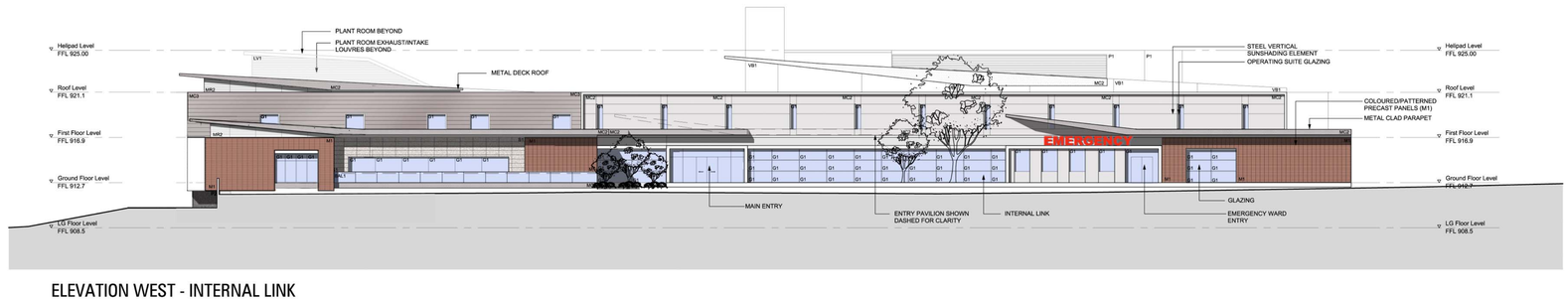
LEGEND

MASONRY CLADDING TYPE 1	M1	METAL CLADDING TYPE 1	MC1	GLAZING	G1	ROLLER SHUTTER	RS
PRECAST TYPE 1	P1	METAL CLADDING TYPE 2	MC2	LOUVRES	LV1	CONCRETE OFF FORM	COF
PRECAST TYPE 2	P2	METAL CLADDING TYPE 3	MC3	BALUSTRADE	BAL1		
VITRAPANEL 1	VB1	METAL GRILL TYPE 1	MG1	METAL ROOF TYPE 1	MR1		
VITRAPANEL 2	VB2	STONE CLADDING	S1	METAL ROOF TYPE 2	MR2		

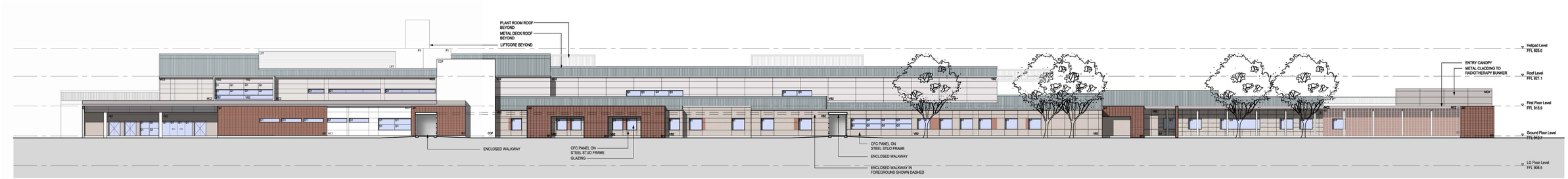
1:200 @ A0



ELEVATION WEST - ENTRY CANOPY



ELEVATION WEST - INTERNAL LINK

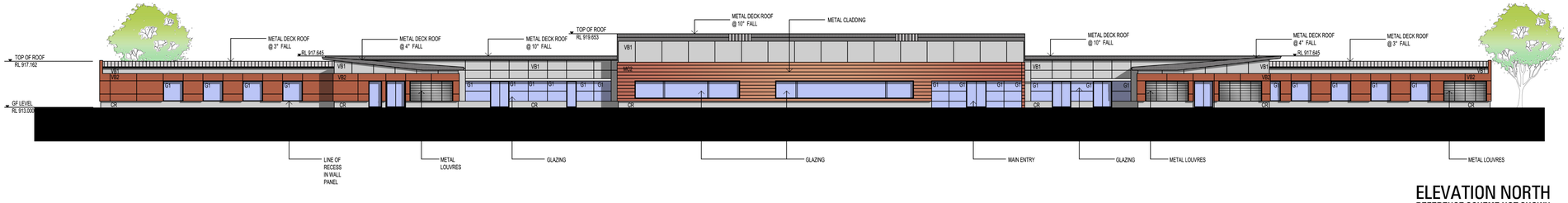


ELEVATION SOUTH

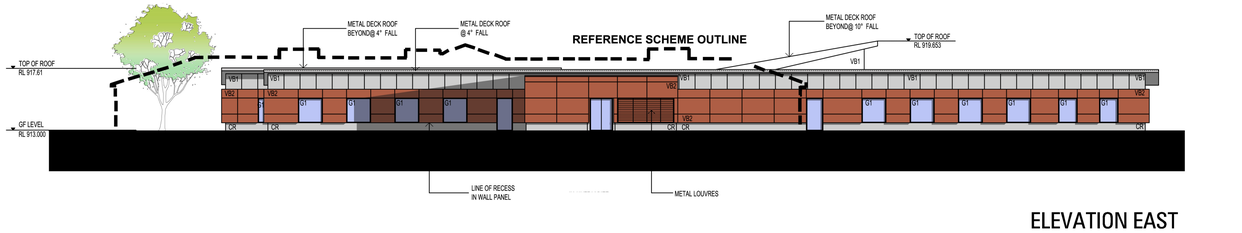
LEGEND

MASONRY CLADDING TYPE 1	M1	METAL CLADDING TYPE 1	MC1	GLAZING	G1	ROLLER SHUTTER	RS
PRECAST TYPE 1	P1	METAL CLADDING TYPE 2	MC2	LOUVRES	LV1	CONCRETE OFF FORM	COF
PRECAST TYPE 2	P2	METAL CLADDING TYPE 3	MC3	BALUSTRADE	BAL1		
VITRAPANEL 1	VB1	METAL GRILL TYPE 1	MG1	METAL ROOF TYPE 1	MR1		
VITRAPANEL 2	VB2	STONE CLADDING	S1	METAL ROOF TYPE 2	MR2		

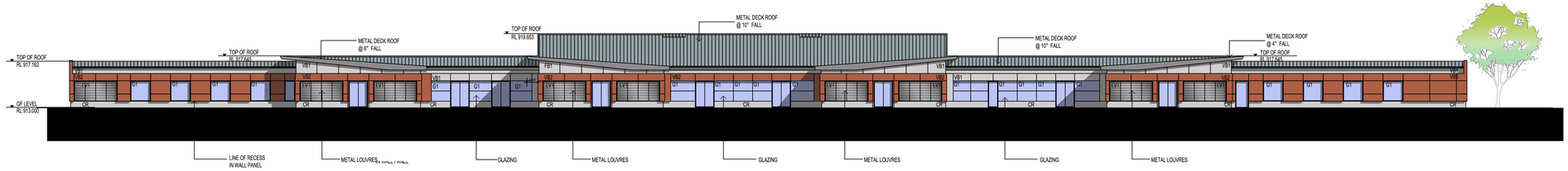
1:200 @ A0



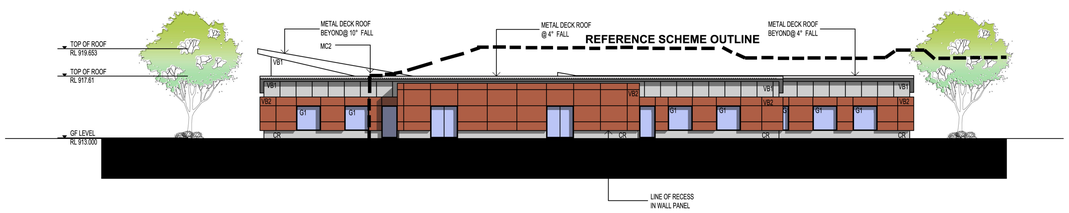
ELEVATION NORTH
REFERENCE SCHEME NOT SHOWN



ELEVATION EAST



ELEVATION SOUTH
REFERENCE SCHEME NOT SHOWN

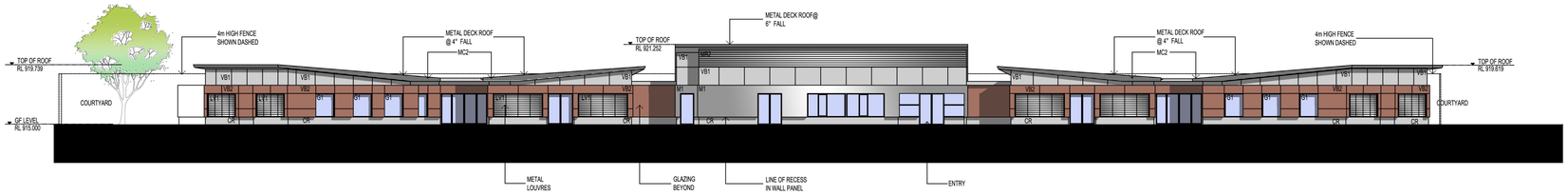


ELEVATION WEST

LEGEND

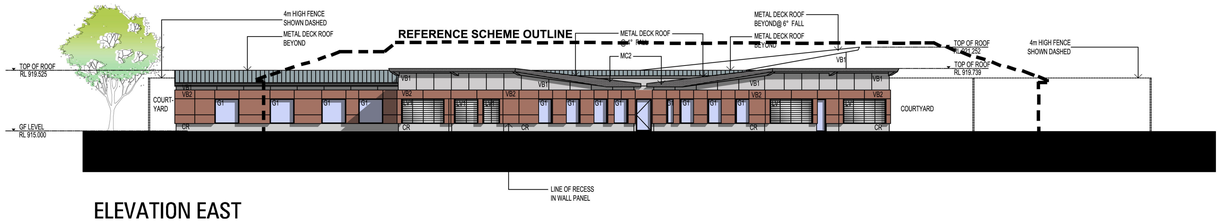
MASONRY CLADDING TYPE 1	M1	METAL CLADDING TYPE 1	MC1	GLAZING	G1	ROLLER SHUTTER	RS
PRECAST TYPE 1	P1	METAL CLADDING TYPE 2	MC2	LOUVRES	LV1	CONCRETE OFF FORM	COF
PRECAST TYPE 2	P2	METAL CLADDING TYPE 3	MC3	BALUSTRADE	BAL1		
VITRAPANEL 1	VB1	METAL GRILL TYPE 1	MG1	METAL ROOF TYPE 1	MR1		
VITRAPANEL 2	VB2	STONE CLADDING	S1	METAL ROOF TYPE 2	MR2		

1:200 @ B1

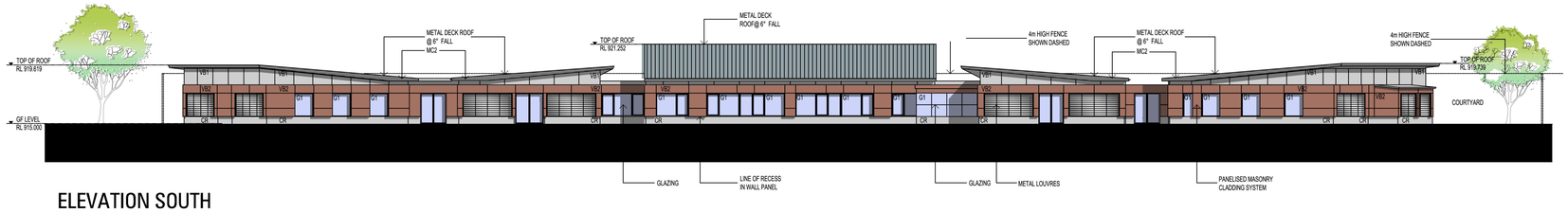


ELEVATION NORTH

REFERENCE SCHEME OUTLINE NOT SHOWN



ELEVATION EAST



ELEVATION SOUTH

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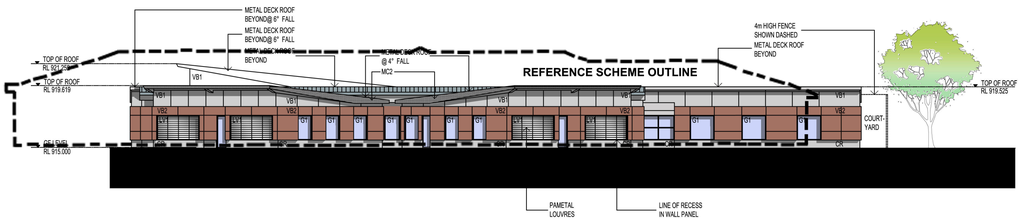


ELEVATION WEST

LEGEND

MASONRY CLADDING TYPE 1	M1	METAL CLADDING TYPE 1	MC1	GLAZING	G1	ROLLER SHUTTER	RS
PRECAST TYPE 1	P1	METAL CLADDING TYPE 2	MC2	LOUVRES	LV1	CONCRETE OFF FORM	COF
PRECAST TYPE 2	P2	METAL CLADDING TYPE 3	MC3	BALUSTRADE	BAL1		
VITRAPANEL 1	VB1	METAL GRILL TYPE 1	MG1	METAL ROOF TYPE 1	MR1		
VITRAPANEL 2	VB2	STONE CLADDING	S1	METAL ROOF TYPE 2	MR2		

1:200 @ B1

Appendix B

PROVIDE SCREEN PLANTING
BOUNDARY
STAFF CARPARK
174 SPACES
TURF
TREE PROTECTION
FOR COURTYARD DETAILS
REFER LA03-LA05
PUBLIC CARPARK
111 SPACES
FEATURED TREE TO TERMINATE AXIS AT ENTRY
OXYGEN TANK
GENERAL HOSPITAL
MAIN ENTRY
MAIN ENTRY
EMERGENCY ENTRY
TURF
GRADED BANK
FUTURE STAFF STUDENT ACCOMODATION (2 STOREY)
AVENUE OF FEATURE TREES TO PROVIDE A BUFFER AND DEFINE HERITAGE GARDENS
INFORMAL PLANTING TO PROVIDE SCREEN
FUTURE AMBULANCE STATION (2 STOREY)
TREE PROTECTION ZONE
REINFORCE AVENUE WITH ADDITIONAL TREE PLANTING
FOR COURTYARD DETAILS REFER LA03-LA05
ACUTE MENTAL HEALTH
TURF
REINFORCE EXISTING LINE OF TREES TO TERMINE WITH LARGE FEATURE TREE
FOREST ROAD
PUBLIC CARPARK
200 SPACES
TURF
BOUNDARY
BLOOMFIELD MEMORIAL GARDEN
STAFF MEMORIAL GARDEN
TURON HOUSE GARDEN
REINFORCED EXISTING ORCHARD
BUS STOP
BLDG 48 WRD 16
ADMINISTRATION
BLDG 40 WRD 19
CLINICAL SERVICE
BLDG 41 WRD 18
BLDG 46 WRD 17
TURF
FOR COURTYARD DETAILS REFER LA03-LA05
FOR COURTYARD DETAILS REFER LA03-LA05

LEGEND

- EXTENT OF WORK
- HIT & MISS KERB TO ALLOW WATER TO ACCESS SWALE
- EXISTING TREE TO BE RETAINED
- PROPOSED TREE 50% 45L 50% 75L
- PROPOSED FEATURE TREE 150L POT SIZE
- PROPOSED LOW LEVEL PLANTER 2 x 150mm /m2 8 x ENVIROTUBES /m2
- PROPOSED SPECIMEN PLANTING 1 x 300mm /m2 4 x 150mm /m2
- TURF
- TREE IN ECO TRIHEX PAVING
- CONCRETE PADS
- FENCE

1:500@B1

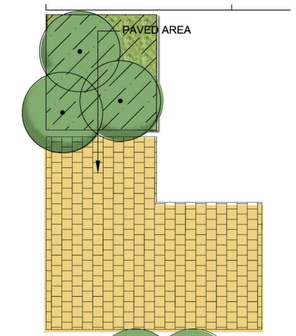
PROPOSED PLANT LIST

DECIDIOUS TREES	EVERGREEN TREES	PALMS	CONIFERS	MASS PLANTING EXOTIC SHRUBS	MASS PLANTING NATIVE SHRUBS	MASS PLANTING GROUNDCOVERS
Acer Platanoides	*Casurina cunninghamiana*	*Phoenix Roebelenii*	*Cedrus Atlantica 'Glauca'*	*Camellia Sasanqua*	*Banksia Integrifolia*	*Agapanthus 'Dwarf White'*
Betula Pendula Youngii'	*Eucalyptus Camaldulensis*	*Trachycarpus Fortunei*	*Cedrus Deodara*	*Gardenia Augusta*	*Banksia Ericifolia*	*Ajuga Reptans*
Cornus Capitata	*Eucalyptus Elata*	*Washingtonia Robusta*	*Cupressus Sempervirens*	*Hibiscus Syriacus*	*Callistemon 'Western Glory'*	*Dianella Caerulea*
Fraxinus Excelsior 'Aurea'	*Eucalyptus Nicholi*		*Juniperus Virginana 'Spartan'*	*Laurus Nobilis*	*Dodonaea Viscosa 'Purpurea'*	*Dianella 'Little Jess'*
Gingko Biloba	*Eucalyptus Globulus*		*Pinus Pinea*	*Phormium 'Bronze Baby'*	*Acacia Floribunda*	*Dianella 'Cassa Blue'*
Lagerstromea Indica	*Eucalyptus Mannifera*			*Photinia Robusta*	*Melaleuca Armillaris*	*Liriope Muscari*
Magnolia Sasanqua	*Eucalyptus Saligna*			*Viburnum Odoratum*	*Leptospermum 'Burgundy Green'*	*Liriope 'Evergreen Giant'*
Platanus x Hybrida	*Magnolia Grandiflora*				*Westringia Fruticosa*	*Lomandra Longifolia*
Pyrus Calleryana						*Lomandra 'Tanika'*
Quercus Palustrus						*Ophiopogon japonicus 'Nigra'*
Quercus Robur						*Poa 'Kingsdale'*
Ulmus Parvifolia						*Stachys Byzantina*
						Trachelospermum Jasminoides
						Viola Hereracea

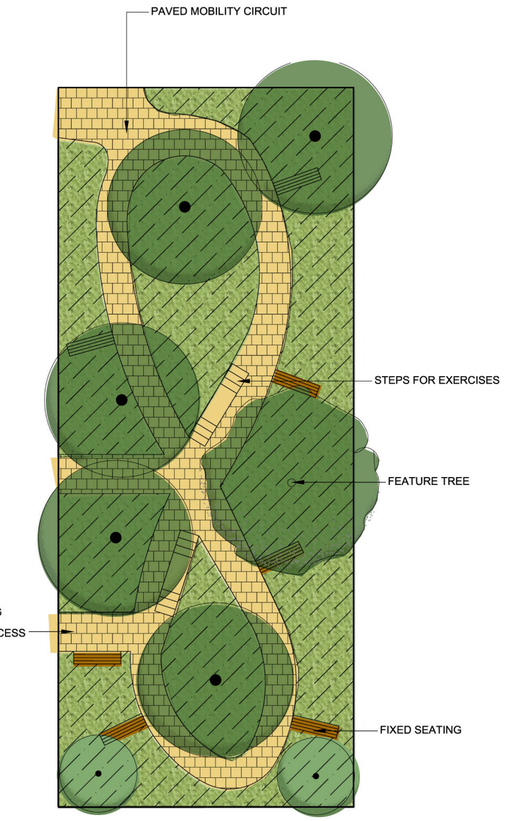
LEGEND

- EXTENT OF WORK
- HIT & MISS KERB TO ALLOW WATER TO ACCESS SWALE
- EXISTING TREE TO BE RETAINED
- PROPOSED TREE 50% 45L 50% 75L
- PROPOSED FEATURE TREE 150L POT SIZE
- PROPOSED LOW LEVEL PLANTER 2 x 150mm /m2 8 x ENVIROTUBES /m2
- PROPOSED SPECIMEN PLANTING 1 x 300mm /m2 4 x 150mm /m2
- TURF
- TREE IN ECO TRIHEX PAVING
- FENCE

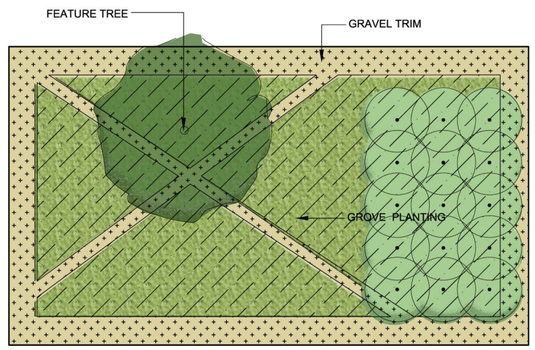
1:500@B1



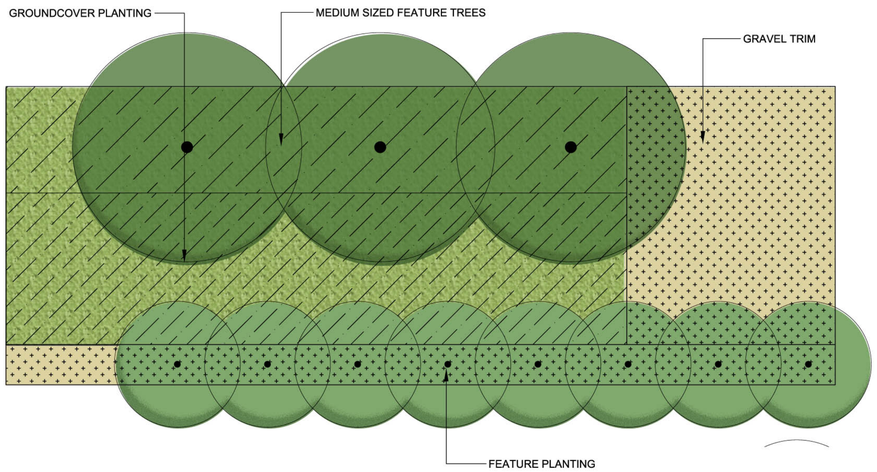
1 COURTYARDS TO GENERAL HOSPITAL



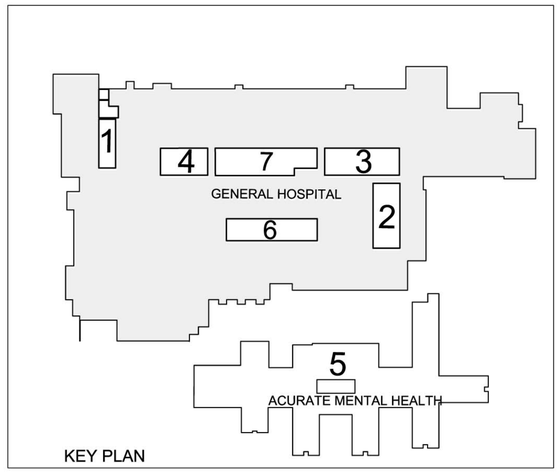
2 MOBILITY COURTYARDS TO GENERAL HOSPITAL



4 COURTYARDS TO GENERAL HOSPITAL



3 COURTYARDS TO GENERAL HOSPITAL

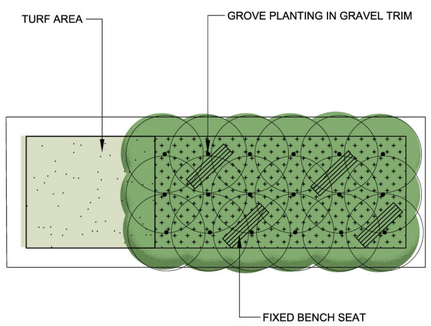


KEY PLAN

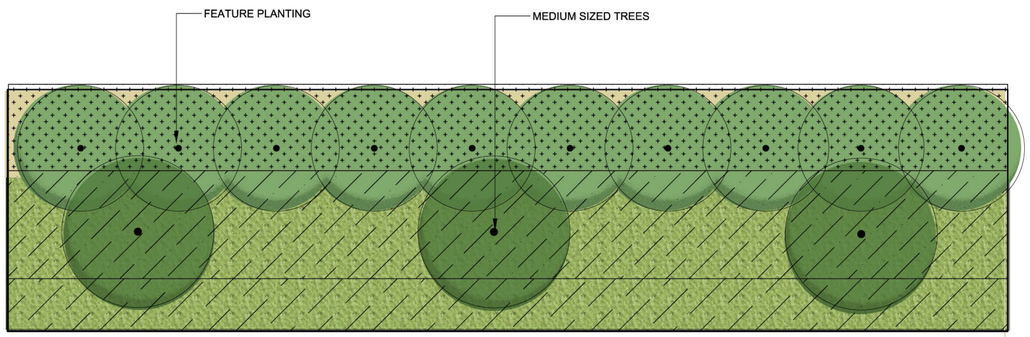
LEGEND

- PROPOSED TREE 100L (1 L/A06) (2 L/A06)
- PROPOSED TREE 75L (1 L/A06) (2 L/A06)
- PROPOSED TREE 45L (1 L/A06) (2 L/A06)
- PROPOSED LOW LEVEL PLANTER 2 x 150mm /m2 8 x ENVIROTUBES /m2 (3 L/A06)
- CONCRETE PADS
- SEAT SECURED INTO GROUND
- TURF (8 L/A06)
- GRAVEL TRIM (8 L/A06)
- PAVING
- FENCE

NOTE: COURTYARD 7 "SPARKLE GARDEN" BY OTHERS

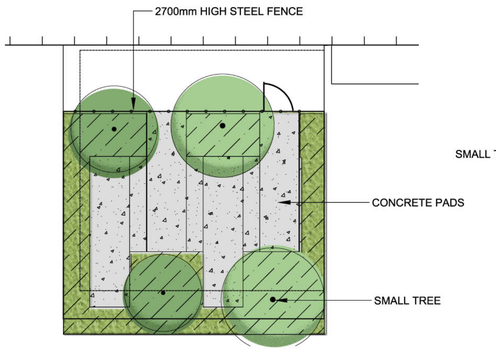


5 COURTYARD TO ACUTE MENTAL HEALTH

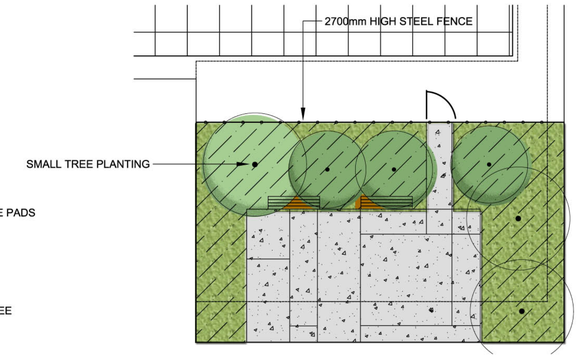


6 COURTYARDS TO GENERAL HOSPITAL

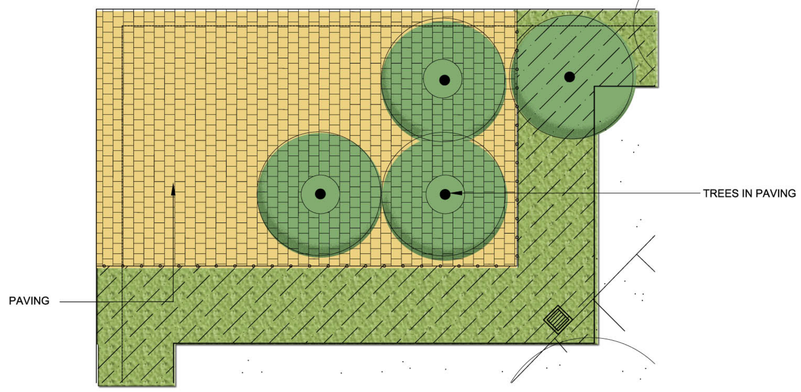
1:100@B1



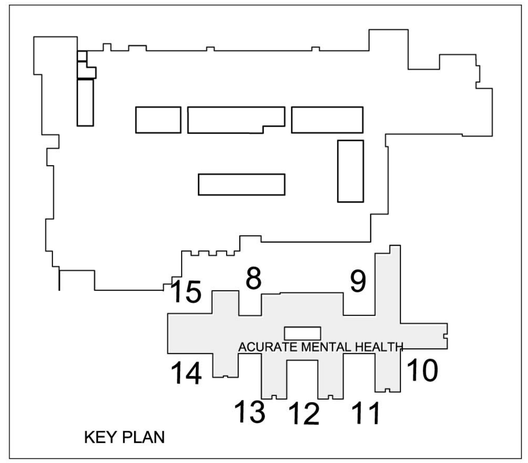
8 COURTYARDS TO ACUTE MENTAL HEALTH

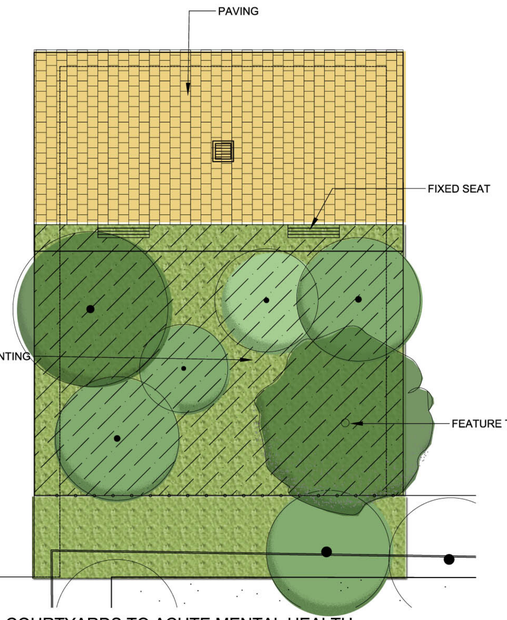


9 COURTYARDS TO ACUTE MENTAL HEALTH

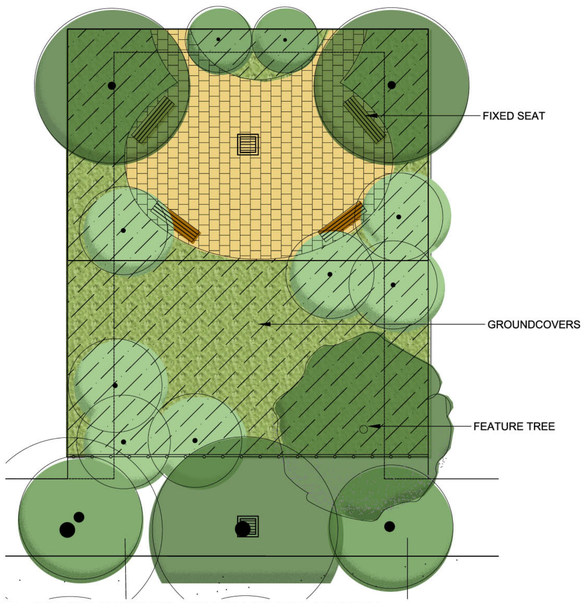


10 COURTYARDS TO ACUTE MENTAL HEALTH

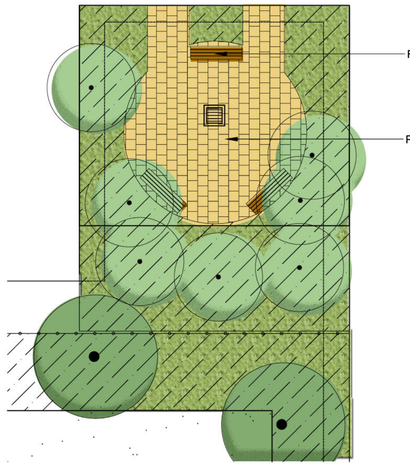




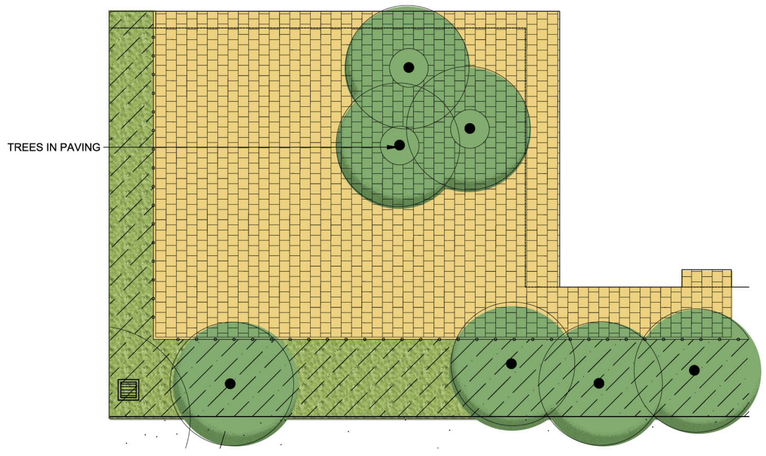
11 COURTYARDS TO ACUTE MENTAL HEALTH



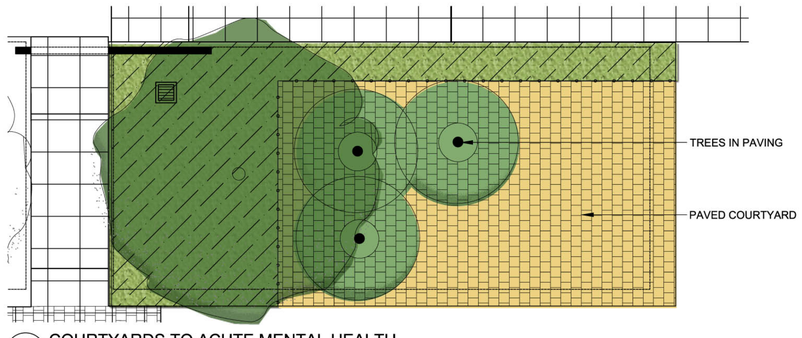
12 COURTYARDS TO ACUTE MENTAL HEALTH



13 COURTYARDS TO GENERAL HOSPITAL



14 COURTYARDS TO ACUTE MENTAL HEALTH

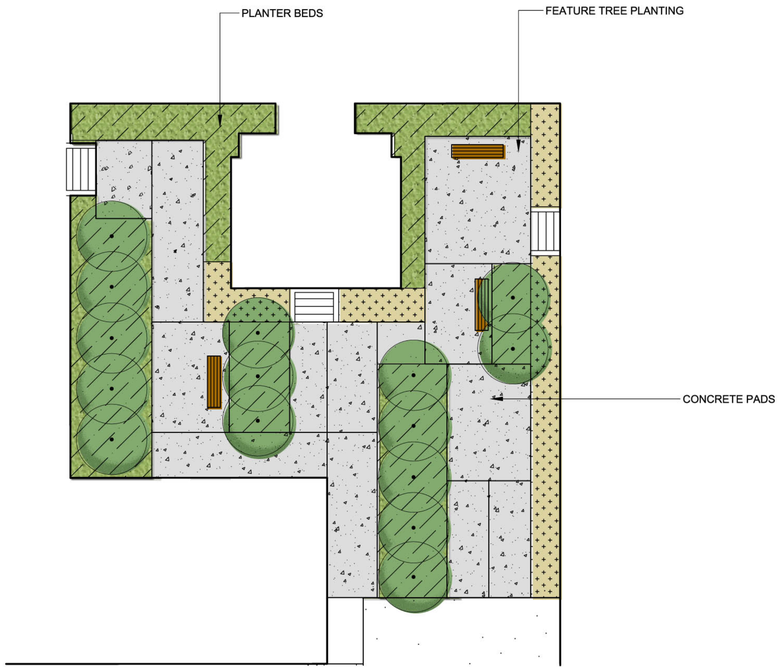


15 COURTYARDS TO ACUTE MENTAL HEALTH

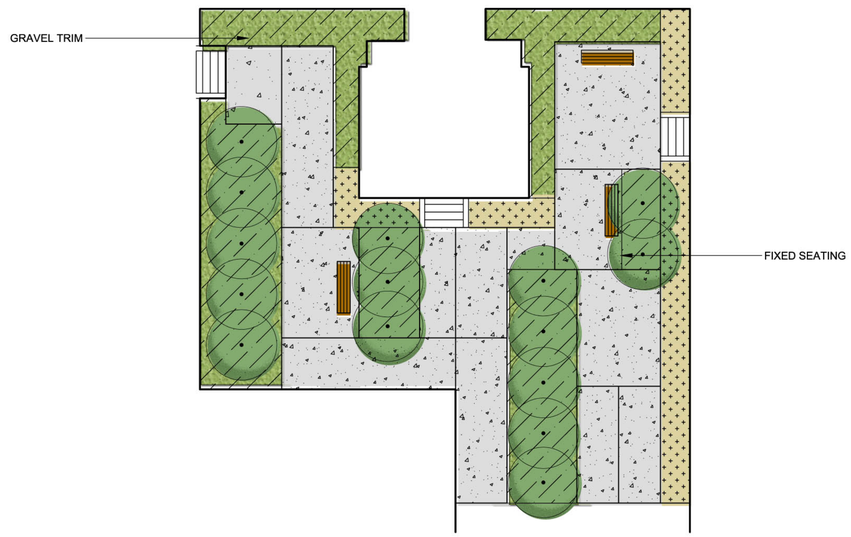
LEGEND

- PROPOSED TREE 100L (1/L09, 2/L09)
- PROPOSED TREE 75L (1/L09, 2/L09)
- PROPOSED TREE 45L (1/L09, 2/L09)
- PROPOSED LOW LEVEL PLANTER (3/L09) 2 x 150mm /m2 8 x ENVIROTUBES /m2
- CONCRETE PADS
- SEAT SECURED INTO GROUND
- TURF (5/L09)
- GRAVEL TRIM (5/L09)
- PAVING
- FENCE

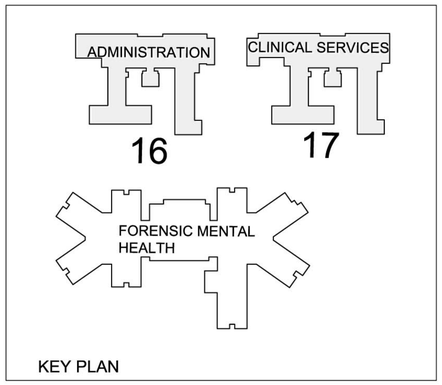
1:100@B1



16 COURTYARDS TO ADMINISTRATION
BUILDING 40 WARD 19



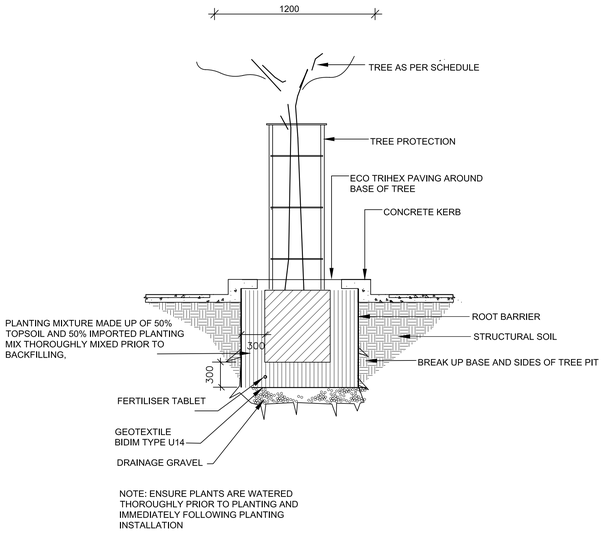
17 COURTYARDS TO CLINICAL SERVICES
BUILDING 41 WARD 18



LEGEND

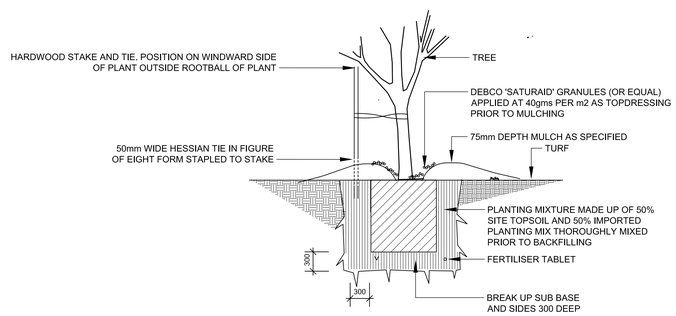
- PROPOSED TREE 100L (1 LA05 / 2 LA05)
- PROPOSED TREE 75L (1 LA05 / 2 LA05)
- PROPOSED TREE 45L (1 LA05 / 2 LA05)
- PROPOSED LOW LEVEL PLANTER (3 LA05)
  2 x 150mm /m2
  8 x ENVIROTUBES /m2
- CONCRETE PADS
- SEAT SECURED INTO GROUND
- TURF (6 LA05)
- GRAVEL TRIM (5 LA05)
- PAVING
- FENCE

1:100@B1



NOTE: ENSURE PLANTS ARE WATERED THOROUGHLY PRIOR TO PLANTING AND IMMEDIATELY FOLLOWING PLANTING INSTALLATION

1 TREE PLANTING IN PAVING
SCALE 1:20



NOTE: ENSURE PLANTS ARE WATERED THOROUGHLY PRIOR TO PLANTING AND IMMEDIATELY FOLLOWING PLANTING INSTALLATION

2 TREE PLANTING IN GRASS
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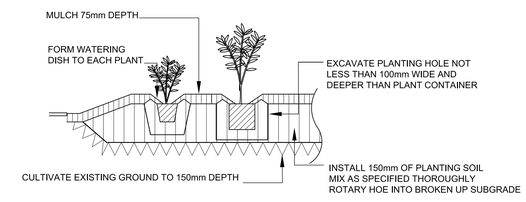

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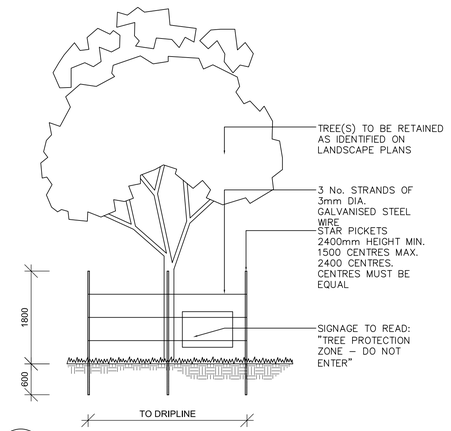

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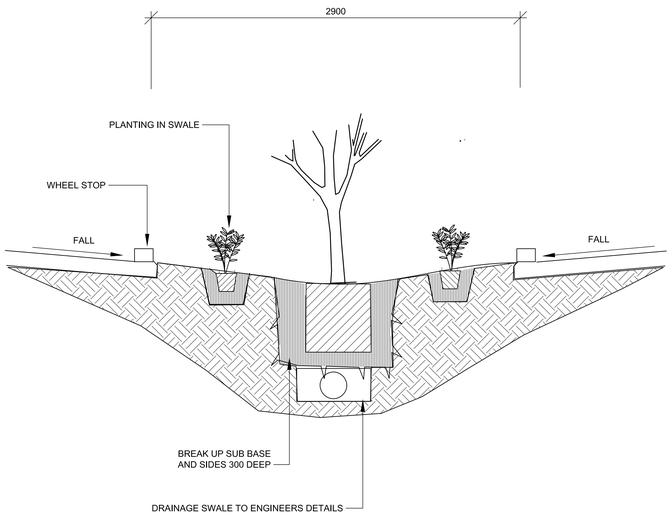
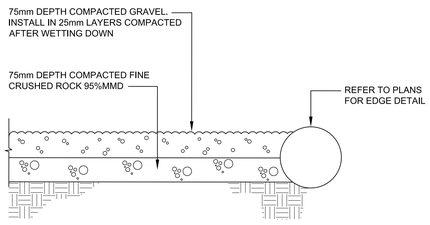
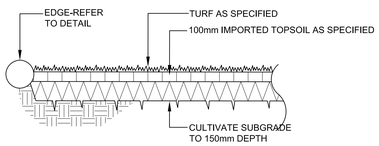


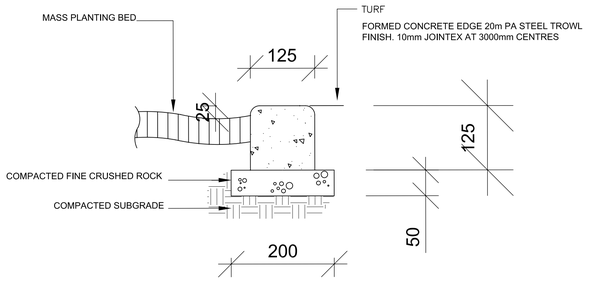
4 DRAINAGE SWALE-TYPICAL SECTION
SCALE 1:20



5 PAVING-DECOMPOSED GRAVEL
SECTION 1:20



6 TURF
SECTION 1:20



7 EDGE-CONCRETE
TYPICAL SECTION 1:5

SCALE:VARIES

Appendix C

Heritage Impact Statement

For pinnacle + healthcare

Orange Base Hospital Project at the Bloomfield site, Orange

Draft Issue: Thursday, 1 November 2007

Current Issue: Friday, 18 January 2008

1. INTRODUCTION

1.1 BACKGROUND

This Statement of Heritage Impact (SHI) has been prepared by David Scobie Architects Pty Ltd, to accompany a major project application to the Minister for Planning, for the proposed redevelopment of Bloomfield Hospital. Reforms resulting from the NSW Rural Health Report IPART Enquiry into NSW Health Services and the Area Health Service restructure require that the health services at Bathurst and Orange hospitals be modified and improved to meet contemporary standards. The NSW Government has determined that Orange hospital is to be redeveloped as part of a major health program in that region.

The NSW Government, NSW Health and Greater Western Area Health Service (GWAHS) agreed that a total redevelopment presented the best opportunity of introducing more effective service models and facilities.

In early 2004, the NSW Government Architect's Office was engaged by the GWAHS, to undertake a feasibility study regarding potential siting for a new Orange Hospital including a preliminary heritage assessment of the Bloomfield Hospital site, which was the preferred site. In 2005, the NSW Government Architect's Office was further commissioned to prepare a Conservation Management Plan (CMP) for the Bloomfield Hospital site. The report, which found the site is of exceptional heritage significance, has been adopted by the NSW Department of Health. The site is listed on the State Heritage Register: Listing number 01745, 10 March 2006.

Three consortia were short listed, after a tendering process in 2006, to build and operate the new hospital. In 2007, the *pinnacle + healthcare* team was selected as the preferred provider.

1.2 USE OF THIS DOCUMENT

This Statement of Heritage Impact document adopts the format provided in the previous heritage impact statement produced by the Government Architect (July 2006).

The aim is to analyse the heritage impacts of the proposed development as adopted and developed by the *pinnacle + healthcare* consortium, to ensure that the selected scheme is consistent with the Conservation Management Plan. The CMP contains information about the history, site analysis and significance of the place that is not repeated here and which is necessary to form a sound understanding of the site and as a basis for decision-making.

1.3 PREVIOUS REPORTS

As previously noted, three heritage related reports have already been prepared for this site by the Government Architect's Office:

- Government Architect's Office, NSW Department of Commerce, *Bloomfield Hospital Preliminary Heritage Assessment*, Prepared for Greater-Western Area Health Service, Report 04/15, June 2004.
- Government Architect's Office, NSW Department of Commerce, *Bloomfield Hospital Conservation Management Plan*, Prepared for Greater-Western Area Health Service, Report 05/18, July 2006.

- Government Architect's Office, NSW Department of Commerce, *Bloomfield Hospital Statement of Heritage Impact, Orange Health Campus Development,* Prepared for Greater-Western Area Health Service, Report 06/40, August 2006.

1.4 METHODOLOGY AND LIMITATIONS

This Statement of Heritage Impact is generally consistent with the guidelines to the *Australia ICOMOS Charter for the Conservation of Places of Cultural Significance 1999 (The Burra Charter)* and the guidelines for heritage management contained in the *NSW Heritage Manual*.

This current report aims to assess the proposed redevelopment in terms of its impact on the heritage significance of the Bloomfield Hospital site. The first half of the report contains a brief historical outline, physical description and the assessment of significance from the CMP. Understanding the SHI relies on an understanding of the CMP.

The second half of the SHI outlines the proposal and conservation philosophy, assesses the heritage impact arising from the proposal and makes recommendations to avoid or minimise potential impacts. It addresses relevant policies from the CMP in detail, and recommends actions for specific elements of the site.

This SHI responds only to the proposal for redevelopment as described in the documentation accompanying the Application.

This documentation includes:

- Architectural Drawings
- Schedule of finishes
- Landscape Drawings

The project application does not contain detailed specification for materials, finishes, colour and changes (internal or external) proposed to existing heritage buildings.

1.5 TERMINOLOGY

The following definitions taken from the *Australian ICOMOS Charter for the Conservation of Places of Cultural Significance 1999* (Burra Charter) have been used in this report.

Fabric means all the physical material of the *place* including components, fixtures, contents and objects.

Conservation means all the processes of looking after a *place* so as to retain its *cultural significance*.

Maintenance means the continuous protective care of the *fabric* and *setting* of a *place*, and is to be distinguished from repair. Repair involves *restoration* or *reconstruction*.

Preservation means maintaining the *fabric* of a *place* in its existing state and retarding deterioration.

Restoration means returning the existing *fabric* of a *place* to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.

Reconstruction means returning a *place* to a known earlier state and is distinguished from *restoration* by the introduction of new material into the *fabric*.

Adaptation means modifying a *place* to suit the existing *use* or a proposed use.

Use means the functions of a place, as well as the activities and practices that may occur at the place.

Compatible use means a *use* which respects the *cultural significance* of a *place*. Such a use involves no, or minimal, impact on cultural significance. The site is oriented north west/south east. For the easier reading and reference in this report, the orientation used will be north south.

1.6 AUTHORSHIP

This report has been written by David Scobie for David Scobie Architects Pty Ltd – Heritage Consultant

2. SITE DETAILS

2.1 SITE LOCATION

Bloomfield Hospital is located on the southern outskirts of the city of Orange in Central Western NSW.

2.2 STUDY AREA

The plan overleaf (Figure 4) shows the site curtilage and heritage curtilage established in the CMP as well as the names used in both the CMP and this SHI to refer to different areas within the site. Bloomfield North, Bloomfield South and the Institutional Parkland are referred to frequently throughout the document. It is noted that the proposed SHR listing curtilage is different to the curtilage listed in 2006. The listed SHR curtilage is shown in Figure 3. For the purposes of this report, reference to Bloomfield Hospital includes all the area originally dedicated for Hospital use as marked in black on Figure 4.

Figure 3: *State Heritage Register curtilage*

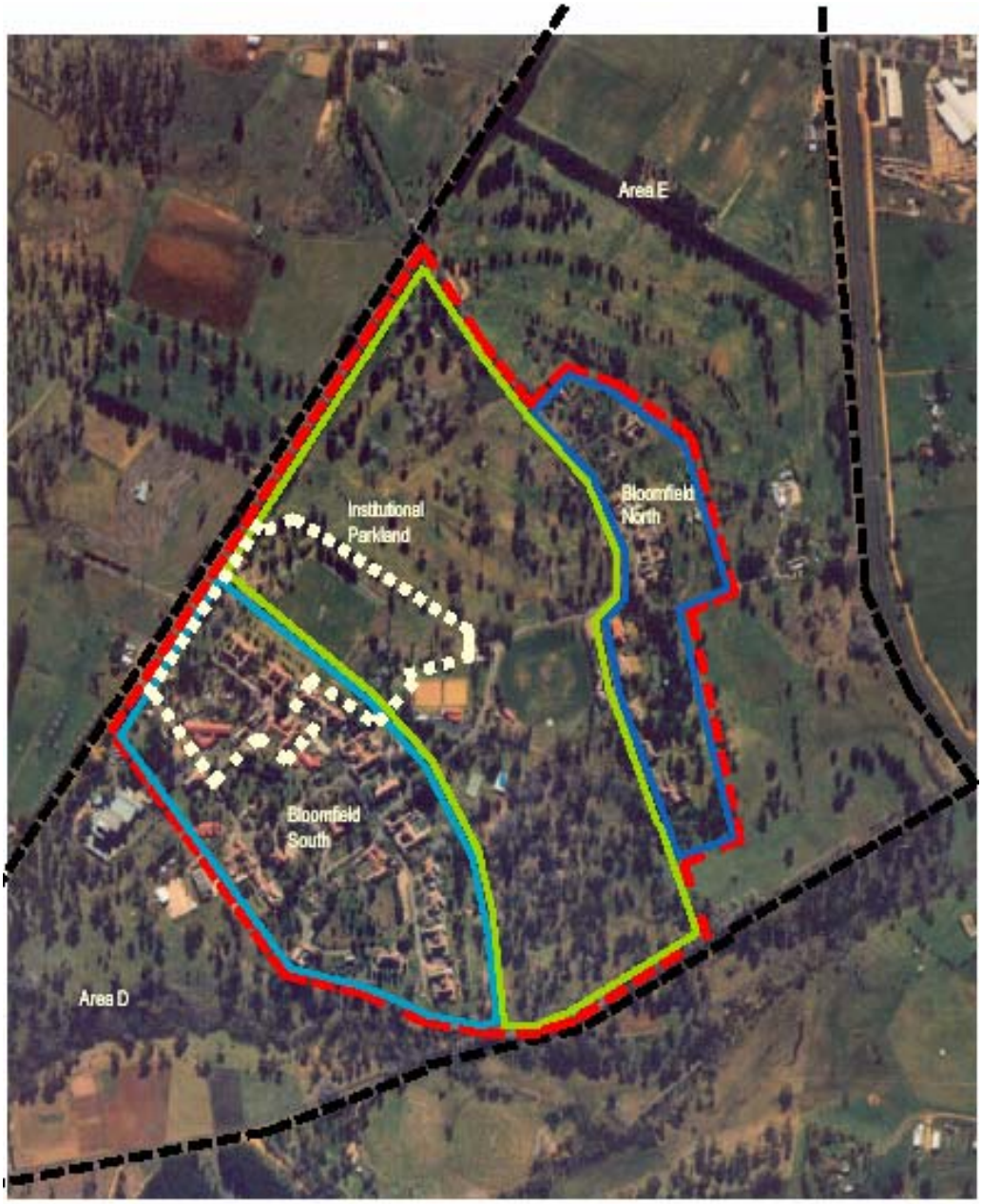


Figure 4: Key heritage curtilages and precincts defined by the CMP, showing the proposed development area dotted in white.

Site Curtilage

Primary Heritage Curtilage

Bloomfield North

Bloomfield South

Institutional Parkland

2.3 OWNERSHIP

The entire site is still in government ownership with the exception of the bowling club, but the leasing arrangements within the site vary greatly. The CMP and Application documentation have details about land ownership.

2.4 CURRENT STATUTORY AND NON-STATUTORY HERITAGE LISTINGS

The site is listed on the following heritage lists and registers:

- *NSW State Heritage Register* – listing number 01745
- *State Heritage Inventory* – Nymagee Lodge and Landscape Features: entry gateway, Elm Avenue and grounds specifically named.
- *Department of Health Preliminary Heritage and Conservation Register – February 1992* – Bloomfield Psychiatric Hospital Precinct: Nymagee Lodge, Gwydir and Yuamgi Buildings, Grounds, and Entrance Gates (Heritage Register Nos. 06/5/7/1000, 1001, 2000 and 3000). Recommends further study for many buildings within the site.
- *Orange LEP 2000 - 12 May 2000* – Nymagee Lodge, Landscape Features: entry gateway, Elm Avenue and grounds.
- *Orange Heritage Study 1985* – Bloomfield Hospital Nymagee Lodge.

3. HISTORY & DESCRIPTION

3.1 THE SITE AS A WHOLE

Refer to Sections 3.0 and 4.0 of the *Bloomfield Hospital Conservation Management Plan (2006)* for a description and history of the site as a whole.

3.2 THE REDEVELOPMENT AREA

The redevelopment area is shown in Figure 5 below.

Figure 5: *Plan of the southern section of Bloomfield showing the redevelopment area in red.*

The Bloomfield site was developed as a masterplan in the form of an axis with lateral wings in sympathy with the topography. Construction commenced in 1922, with the majority of buildings created in the period up to 1935. The Government Architect during this period was McRae (1912-1923). Additional work was carried out up to 1958, with minor alterations being completed later.

The majority of the buildings on the site are good examples of public institutional structures in the revivalist manner – austere, simple and rectilinear, special finishes and details in public areas only, the use of local bricks with decorative heads and sills. There is evidence of the influence of Hardy Wilson and his predominant Georgian Revival architecture during the period.

The interiors of patient areas were designed to allow for heavy wear and tear.

The selected site is within the former male half of the main long-term care precinct of Bloomfield South. Specifically it occupies the buildings and surrounding areas formerly relating to the following:

- The treatment of TB, Epilepsy and unrecovered patients
- the support functions of the nursery and orchard,
- mattress and upholstery workshop,
- carpenters and painters workshop,
- shoemaker/saddle maker, bookmakers workshops,
- playing fields
- Accommodation for the Chief Attendant and Gatekeeper.

Information about individual buildings and the landscape areas at Bloomfield South can be found in Volume 2 of the CMP. Impacts on specific elements are also covered in Section 6.3 of this SHI.

4. STATEMENT OF HERITAGE SIGNIFICANCE

4.1 SUMMARY STATEMENT OF SIGNIFICANCE

The full analysis of significance is reproduced here from Section 5.0 of the Bloomfield Hospital CMP (2006).

The site is listed on the State Heritage Register as a place of cultural heritage significance at the State level.

Bloomfield Hospital is a remarkably intact complex of buildings and landscape areas reflecting philosophies of mental patient care in the late nineteenth and early twentieth centuries. In particular the nineteenth century approach to classification, control and management of patients in a self-sufficient, isolated context is clear in the layout, buildings and landscaping. It still retains the structural layout and all the buildings from its early stages of construction, substantially unaffected by the small number of later additions. As such it is an outstanding example of a purpose built mental health care facility from this era, reflecting health care theories of the time. It was established to meet a need in rural mental health care and still fulfils this role today. It was the only interwar mental hospital to be established in NSW. It is also the last of the series of mental hospitals developed within parkland settings and is a rare example of the garden-suburb philosophy applied to an institutional use.

It contains facilities for both long and short-term care, separating treatment types and gender within a parkland setting. This setting was considered an integral part of the place for its contribution to treatment of the patients providing both a peaceful atmosphere and outlook but also a place for recreation and work.

Although Bloomfield Hospital shares some similarities with other mental health facilities developed on this scale it has some unique characteristics due to the overlay of local approach to landscape and facilities development on a formally planned site structure. It also appears to have fewer changes and additions than other comparable sites.

Conservation of the key characteristics of this site will enable this important record of mental health care approaches throughout the twentieth century to be passed to future generations and has the ability to increase current community understanding through interpretation, education and further research.

It is particularly special as it maintains a long history of close association with a support from the local community. It has a strong association with past and present staff, patients their families. While the general use of the site has remained mental health care, the way the site operates has changed. Despite these changes, the fact the site remains physically intact from the earlier phase's means the original uses and ways of life in the site are still easily understandable and interpretable. The site therefore remains an important physical example of design approaches for mental health care in the early twentieth century.

The key characteristics that contribute to its significance are:
1. The axial layout of the site including:
- its road structure;
- the main axes of wards and administration buildings providing formality but still responding to the local topography;

- symmetrical layout separating genders and treatment types;
- the separation of the long and short term care patients between Bloomfield North and South by use of the institutional parkland;
- the strong patterning of buildings and open and closed spaces.

2. The buildings from the early phases of the use of the site, which show the system of control, classification, treatment and management of patients.
3. The distinctive interior configurations of the buildings from the early phases of development. These demonstrate patient treatment and management regimes.
4. Original and/or distinctive interior finishes, fabric and details.
5. The location and spacing (articulation) of the buildings within the landscape to provide a setting and outlook for each, as part of the treatment of the patients. This includes the sense of space and the intimate outlook from the wards and staff accommodation.
6. The distinctive external forms, character and fabric of the buildings from the early phases of development. These elements combine with the landscape setting to create the institutional village character of the site.
7. The institutional parkland as an open space, setting for the buildings and a place for sport and recreation.
8. The peaceful and tranquil atmosphere provided by the parkland setting.
9. The contrast between the formality of the underlying structure (layout, paths fences, roads) with the generally informal plantings (there are exceptions to this in some areas), the institutional parkland and the surrounding native bushland.
10. The range of 'specimen' plantings and exotic species and the general lack of hard landscaping including road edging, large areas of paving or bitumen.

4.2 DEMONSTRATING SIGNIFICANCE AND THEME

The layout, form and setting of Bloomfield Hospital clearly reflects the philosophies of the late 19th and early 20th centuries for the care of patients with mental disabilities and in particular, the views of the two Inspectors General of the insane, Frederick Norton Manning (1876-1898) and Eric Sinclair (1898-1825). Both advocated the view that mental illness was a form of physical illness and should be treated as such. Both considered that the physical setting of patient care should reflect the latest advances in therapy, with individual pavilions set aside for different categories of illness and plenty of fresh air, sunshine and outdoor space for the vigorous physical activity thought to be required for successful rehabilitation. In addition, the view of Sinclair, that a domestic environment was conducive to recovery, is clearly evident in the use of materials and the scale of development.

Bloomfield remains as an outstanding example of design for mental health care in the late nineteenth and early twentieth century demonstrating all the key characteristics of classification and control of patients, self-sufficiency and use of the surrounding landscape for activity and to provide a restful setting. Many buildings on the site were purpose designed and built for Bloomfield and also reflect a movement from institutional style architecture to more domestic scale and design in the interwar period.

Unlike other hospitals of this type developed before it, changes at Bloomfield have been minimal and the changes that have occurred have not reduced the ability to appreciate the original planning intention and use of the site. Bloomfield Hospital appears to be the last "total institution" of its kind developed for mental health care in NSW and the best surviving example.

5. THE CURRENT PROPOSAL

5.1 INTRODUCTION

The proposed redevelopment of Bloomfield Hospital is the result of extensive consultation with NSW Department of Health and Greater Western Area Health Service regarding the operational needs of a new general hospital for Orange and its relationship to existing mental health services provided at Bloomfield Hospital. The design process has also been informed by consultation with the local community and various statutory bodies. In 2004 a Project Feasibility Plan considered siting options including the existing CBD site, a block of land on the northern outskirts of town and at Bloomfield Hospital. In 2005 a Value Management Study considered configuration options on the Bloomfield site. Once Bloomfield was confirmed as the preferred site, a preferred option within the site was developed in more detail.

The proposed development involves the establishment of the Orange Health Campus within the grounds of Bloomfield Hospital. A new hospital is to be located on the western edge of the Bloomfield site. The proposed redevelopment is based on the construction of new buildings and service infrastructure plus the reuse of a number of existing buildings, to provide a contemporary facility delivering a range of acute and rehabilitation health services.

The design prepared by the Government Architect in 2005/06 has undergone further modifications during the tendering and selection process. These modifications include the addition of a radiotherapy unit, blood bank and teaching unit. The pinnacle healthcare proposal has been accepted by the Department of Health, and final design documentation, prior to preparation of working drawings, specifications and construction, has been prepared. This documentation is the subject of the Heritage Impact Statement. Architectural and Landscape Plans are in Appendix 1.

This Heritage Impact Statement is for the current Part 3A Application only.

The assessment of the heritage impact of this proposal is contained in Section 6.0 of this SHI.

5.2 SITING OPTIONS

A range of siting options for a redeveloped Orange Hospital has been considered since 2003. In 2003 and 2004 a Procurement Feasibility Plan was prepared by Clearview, which recommended a development strategy for health services provided at Bathurst, Orange and Bloomfield Hospitals. The potential sites considered were the existing Orange Base Hospital, Bloomfield Hospital and a site offered by Sydney University on the outskirts of town.

This process resulted in the identification of Bloomfield Hospital as the preferred option and a Value Management Study was commissioned to develop options for Bloomfield in more detail.

The options for the redevelopment of the Bloomfield Hospital site have focused on the western part of Bloomfield South and the Institutional Parkland, the playing fields in particular. Other spaces were considered unsuitable as they failed to achieve integration of existing mental health buildings and new hospital facilities.

A master development control plan, prepared in 1989, first identified the heritage significance of the site, including relationships between significant buildings, the layout and the landscape.

5.3 SCHEME DESIGN OPTIONS

The 2005 Value Management Study was prepared to specifically consider options for redevelopment of the proposed site in the western half of Bloomfield South. Although they were driven by operational needs of the hospital, there was an understanding of the significant heritage values of the site, which had become apparent in 1989, and then during the preparation of the CMP for the property. Informal heritage advice on potential impacts was sought from GAO heritage specialists at various stages of the options' development process and the detailed development of the preferred option. Heritage Office staff were also briefed on a number of occasions about the progress of the project.

In developing concept options for the redevelopment of the Bloomfield site to accommodate the new hospital, a broad range of principles were adopted for the siting of the buildings:

- Primary vehicle arrival off Forest Road with direct access to Emergency and the main entrance.
- Use Forest Road frontage for parking and access and to allow a setback for the new buildings and retention of the avenue of trees along Forest Road as both a marker of the site and screen to future development.
- Preference to orient the inpatient units north for sunlight and views.
- Preference for the buildings to run east/west to minimise solar load on east and west elevations.
- Maintain a minimum 30-40m curtilage to the north of the retained heritage buildings, to re-interpret the heritage gardens and provide outdoor space for patients.
- Place major buildings on playing fields so as to minimise demolition of the established (exotic) planting.
- Use the fall across the site to provide on grade access to a lower level for non-clinical support functions, linen, kitchen, stores, etc.
- Generally aim to restrict new development to the western (Forest Road) side of the site to reduce the visual impact on the heritage buildings and the "park-like" setting.

Three options were considered in detail. They are summarised below:

Concept 1
A 3-storey block, parallel to and north of the western Bloomfield group of buildings with most of Acute Mental Health on the lower ground beneath two storeys of inpatient units and SMSHOP Acute Mental Health in a single-storey building south of Wards 18 and 19. Amaroo (Building 44) (former epileptic ward) is to be used for adult rehabilitation. All heritage buildings retained except former Male TB Ward (Building 38) and the greenhouse.

Concept 2
A 2-storey block, parallel to and north of the western Bloomfield group of buildings with all of Acute Mental Health in a single-storey building parallel to Forest Road and West of Ward 18 (Building 41). All heritage buildings retained except Male TB Ward (Building 38), Ward 19 (Building 40) (Building 40) and the greenhouse.

Concept 3

As for Concept 1, except more of the Acute Mental Health is to be accommodated in the single-storey building south of Wards 18 and 19. All heritage building retained except former Male TB Ward (Building 38) and the greenhouse.

The preferred option was developed following the listing of the site as state significant in July 2006 to reduce the amount of proposed demolition and based on revised needs for the Tertiary Mental Health facilities. This option consolidated the Acute Mental Health facilities within a single storey building on the north side of the existing Ward Building 18 and 19 which were retained, reused the existing buildings, Amaroo (Building 44) and Canobolas Clinic for inpatient units and constructed a new custom built single storey Forensic Mental Health building. This option, prepared by the Government Architect, was the scheme given Consent under Part 3A and tendered to private sector consortia. It forms the basis of the current proposal from pinnacle + healthcare, with minor amendments. Additional facilities originally foreshadowed as expansions – blood bank, teaching and radiotherapy have been incorporated into the scheme for construction. It is further described below.

5.4 CURRENT PROPOSAL

The proposed redevelopment will include the construction of a purpose built hospital on existing playing fields north of the principal axis of buildings in Bloomfield South, plus additional mental health facilities in new and adapted existing Bloomfield Hospital buildings to the south of the main hospital. This consolidates the mental health facilities at Bloomfield to the western section of the site near Forest Road and reuses some of the existing historic buildings on the site. The main entry to the new hospital will be from Forest Road. This will be an additional entry to the two existing entries to Bloomfield. Generally, the new hospital will form a new landscaped precinct incorporating the existing ward buildings and their historic garden curtilage.

The majority of the historic buildings within the redevelopment area will be retained with a few exceptions. Uses for Amaroo (Building 44) and former Male Wards 18 and 19 (buildings 40 and 41 on the Application plans) have been identified. Some details about modifications to these buildings are available and are discussed in Section 6.3.

The redevelopment will result in the demolition of the former Ward 20 (Male TB/building 38) and the greenhouse and associated orchard (Figure 6).

The greenhouse and orchard sit directly within the footprint of the proposed new Forensic Mental Health facility to the south of former Wards 18 and 19. The new facility cannot be built there without demolition of these items and no suitable alternative location exists. The former Ward 20 (Building 38) sits within an area set aside for the new entry, internal access road and car parking.

The rationale for its demolition is based on the following:

- immediate external character of surrounds and ground level to Ward 20 (Building 38) will be dramatically altered with new ground levels (extensive fill) to provide pedestrian and vehicular access to the hospital ground floor entry and required car park levels.
- the location of Ward 20 (Building 38) compromises required car parking capacity, prevents safe and efficient ambulance entry, disrupts vehicular and bus movement within the campus, as well as prevents ease of pedestrian movement and way finding to the hospital main entry.
- over 1000 cars for public and staff are required to be accommodated on the site and have been sensitively split into groups with accompanying appropriate landscaping, soft paving, etc, to service the functional needs of the various hospital entries.
- entry to any major hospital is essential for people in stressed state to clearly identify entry, access, etc, particularly to emergency. Retaining Ward 20 (Building 38) would be disruptive to this essential process.

- if retained, there is no brief requirement for use of the building and under the current tight cost structure the building may be a liability if left vacant, with the possibility of the eastern wing being demolished to provide essential connecting service and patient access to the Bloomfield site.
- visually inappropriate to retain Ward 20 (Building 38) in front of major referral hospital.

The existing avenue of Pin Oaks and Cottonwoods along Forest Road will be retained and protected, providing a screen between the new hospital and the main road. The proposed design will replace the second row of drought-affected Cottonwood with new trees. Surrounds of the new hospital and associated gardens will be regenerated and landscaped to reinforce the Bloomfield precinct and its existing character. Refer to the landscape proposal drawings in the Appendix.

The design intent of the development includes continuation and extension of the site's existing hospital use. The development will involve the insertion of a modern health facility within a site that has accommodated a mental hospital since the beginning of the last century. The proposed buildings are generally long forms, occupying the site of the existing playing field and using the gentle fall across the site to accommodate the bulk, form and height of the new building. The hospital will range in scale from 1 – 3 stories, with the main entry and the emergency entry being single storey attachments in the foreground of the main two storey building.

The associated new single storey Acute Mental Health building will be located between the General Hospital and existing heritage buildings. A single storey Forensic Mental Health building will sit in the area of the existing orchard to the south of former wards 18 and 19 (buildings 40 – Administration, and 41 – Clinical Services).

The architectural character of the redevelopment is contemporary with horizontal forms characterised by walls rather than roof and does not attempt to replicate the form of the heritage buildings. The forms are modelled in related detail within the walls through the use of a grid of joints which express the cladding technology. This visual pattern reflects and compliments the dominant rectilinear brick forms within the heritage precincts.

Materials for the new hospital include concrete panels and lightweight cladding. The red earth coloured concrete is used specifically in prominent elements on the ground floor elevations, such as the entrances to reflect the colour and character of the historic buildings. The colour scheme for the buildings is intended to reflect and enhance the relationship of the buildings with the landscape. The objective in using darker earth colours and metallic finishes is to allow the landscape and heritage buildings to dominate the visual setting with the new work being recessive in tone.

The landscape forms a dominant element of the Bloomfield site and the new development attempts to fit within the broad landscape parameters established by the original design, primarily in the creation of intimately scaled spaces within and between the new buildings. The use of courtyards is a pragmatic response to the need for daylight and visual relief in buildings with large floor areas. It also assists in way-finding and provides a reflection of the spaces evident in the masterplan between the heritage buildings. Landscaping species have been chosen to reflect both the exotic and indigenous planting legacies found in the existing landscape.

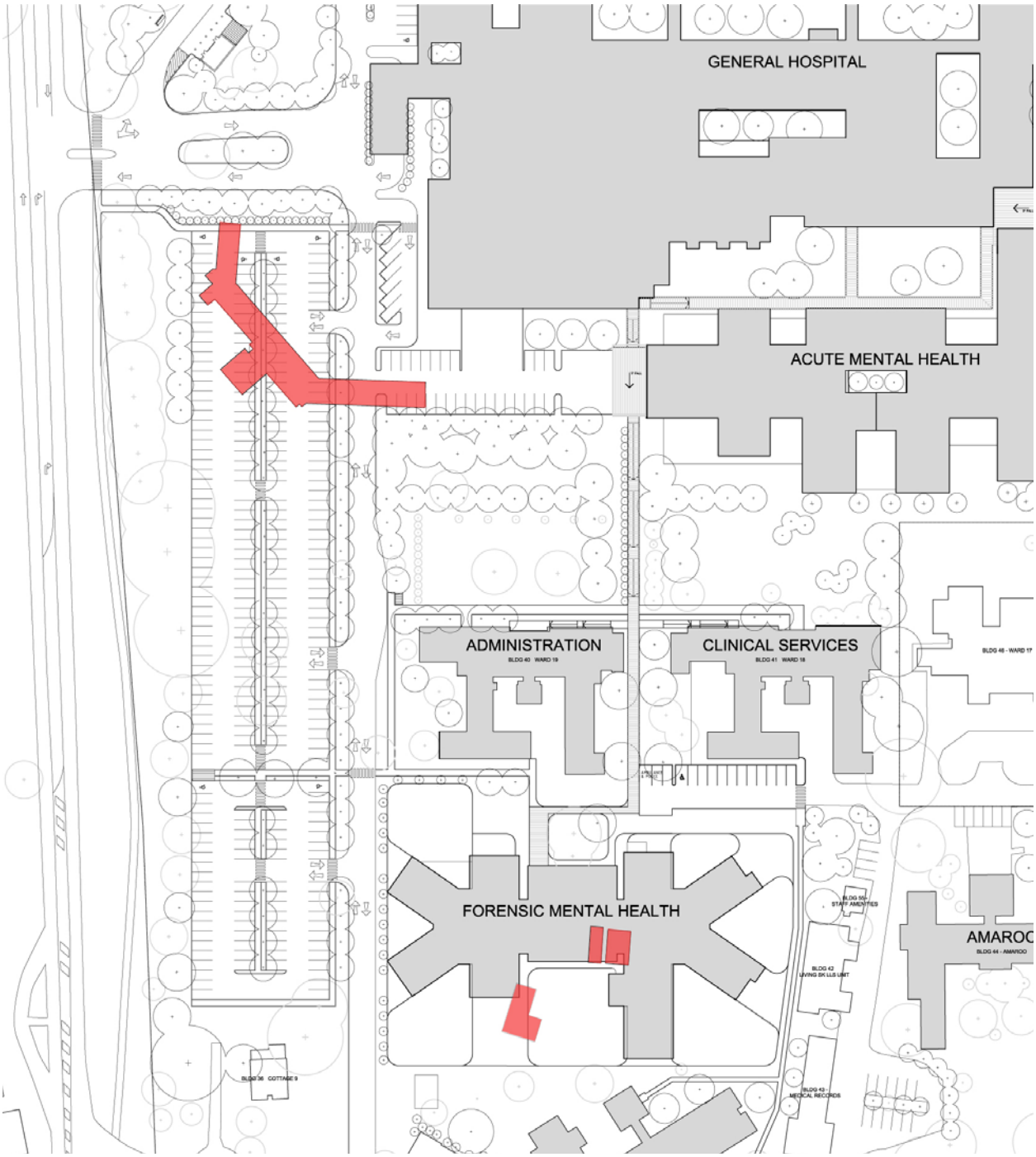


Figure 6: *Overlay of proposed redevelopment with the buildings to be demolished shown in red. This does not show landscape features such as the orchards and playing fields or the section of road to be removed to the south of Wards 18 and 19.*

6. ASSESSMENT OF HERITAGE IMPACT

6.1 GENERAL DISCUSSION

The impact on the heritage values embodied in the redevelopment area and thus the site as a whole is discussed throughout Section 6.0. It considers both positive and negative heritage impacts within the redevelopment area as well as on the heritage values of the site as a whole. It outlines mitigation measures already built into the proposal and then assesses the redevelopment in more detail against the policies of the Conservation Management Plan for the site. This assessment is based on the current scheme design as documented, with relevant architectural and landscape drawings included in the Appendix.

Siting

The CMP establishes that the playing fields site is one of the more significant open spaces. It suggests that the introduction of extensive and/or large scale built forms in this area would have a negative impact on key heritage values of the place, particularly those related to the setting and atmosphere of the Bloomfield South precinct. The proposed Hospital redevelopment is a large-scale and intensive proposal. The range of positive and negative heritage impacts and the measures already put in place to mitigate the negative impacts are discussed below. Further recommendations are made in Section 7.0.

The Redevelopment Area

The proposed redevelopment conserves most existing physical elements of the original Bloomfield Hospital Complex. This is a positive aspect of the design of the proposed redevelopment. The proposal does however add substantial new buildings and some new landscape features in a significant landscaped space in the western area, former male side, of Bloomfield South. It also requires removal of the exceptionally significant Male TB Ward, Building 38, as well as the greenhouse, orchard, south of retained Buildings 40 and 41, and playing fields, north of Buildings 40 and 41.

It is recognised that the design has been driven by the needs of contemporary hospital functionality; however the scale and location of this new development are likely to have substantial negative impacts on aspects of the site's significance.

These impacts are discussed generally below and then in further detail in Section 6.2 of this SHI, against the policies in the Conservation Management Plan.

Positive Heritage Impacts

- The redevelopment retains most of the key elements of the existing historic complex and landscape, including its layout and most of its existing buildings. All of the buildings from the early phase of the site will be retained with the exception of the TB Ward, Building 38. The majority of the original road layout will be retained.
- The proposed new landscaping will reinforce and continue historic and characteristic planting styles. Although the redevelopment will impact the western part of the Institutional Parkland, it is a large area and much of it will remain including the golf course, oval and wooded region between the eastern half of Bloomfield South and Bloomfield North. Similarly, key open spaces within Bloomfield South are not affected.
- Former wards that are currently empty, Administration – Building 40, Clinical Services – Building 41 and Amaroo – Building 44, will be re-used encouraging an appreciation of these buildings and opportunities for their conservation and maintenance. The proposed re-uses are compatible and retain distinctive external forms, character and fabric.
- Increased community access will enhance awareness of the exceptional significance of the place and provide opportunities for interpretation.
- The creation of interpretation structures within the design of the two gardens to the north of the Administration, Building 40 and Clinical Services, Building 41, will celebrate the historical significance of the place and the human stories embedded within the institution.

Negative Heritage Impacts

- The new General Hospital building is located on the playing fields. This is a key open space that has been identified as a significant element in the Conservation Management Plan. This placement and the bulk of the redevelopment will significantly affect the setting and outlook of the main axis of wards on the western (former male) side of Bloomfield South, changing the character of this area. It will also compete with the strength and dominance of the main axis of ward buildings as an element in the landscape. This affects the sense of the deliberate axial planning of the site and the spacing of the wards according to different treatment types, which has already been affected by the regrowth of vegetation on the eastern (former female) side of the site.
- The proposal requires the demolition of the former Male TB Ward, Building 38, one of the few buildings of its kind still existing in NSW. Not only is this a negative impact on the building, it also impacts on the site's significance as a largely intact mental hospital reflecting philosophies of patient care in the late nineteenth and early twentieth century, by removing evidence of a patient treatment type and unusual design approach to support treatment. It is being removed for the construction of a car park and open space at the proposed entrance to the new general hospital (Figure 6).
- The playing fields are to be replaced with the new General Hospital building. They currently contribute to the parkland setting of the main ward axis and are important in their own right for the relationship with former patient treatment regimes and later community use. It is noted that there is no current functional association between the existing hospital and the playing fields.
- The nursery and orchard area, south of Buildings 40 and 41, are to be replaced by the new Forensic Mental Health Building. This will remove evidence of the site's self-sufficiency in its earlier years of operation.

Measures to reduce Heritage Impacts incorporated in the Current Proposal

Measures have been included in the design of the new development to reduce the level of negative heritage impact, without departing from the client's brief.

Measures include:

- Use of the sloping site to reduce the height of buildings immediately adjacent to former wards 18 and 19 (Buildings 40 and 41). The roof of the single-storey Acute Mental Health building will sit close to ground level and along with the retained airing yards of the historic ward buildings will provide a buffer between the former wards and the new hospital. The new hospital has been limited to 2 storeys when viewed from wards 18 and 19.
- Former wards 18 and 19 are proposed for the compatible adaptive re-uses of Administration and Clinical Services. Some detail about modifications required to accommodate these uses is available and is discussed further in Section 6.3.
- The proposed Acute Mental Health building is a well articulated single storey construction and makes use of courtyards similar to the airing courts of the historic buildings throughout the site. The external materials include earth coloured pre-finished compressed fibre cement panels with grey panels to the parapet level facades. Windows are treated as punched and framed openings within the earth coloured walls, while skillion rooves are concealed or expressed with minimal eaves. These materials and design treatments have been selected in response to the surrounding historic building stock. In accordance with the general policies in the CMP regarding new work, it is preferable that the detailing be sympathetic in colour, form and scale rather than attempt to imitate existing heritage buildings.
- The approach to the landscaping surrounding the new development is in keeping with the existing character of the landscape in the Institutional Parkland and Bloomfield South precincts. The planting philosophy continues the existing site character of a mixed vegetation palette of native and introduced species. Tree species contain a high proportion of European

deciduous, Conifers and Palms with a smaller number of Eucalypt, Banksia, Wattle, She Oak and Bottlebrush. New trees required for screening in the broader landscape will be sited in a gardenesque manner, i.e. single specimens given enough space to develop their true form, and a mixture of species evident in any one space. The language of hedge and windbreak planting is continued, as is topiary and colourful border treatments. Recommended species include those that are already found on the site and others that are sympathetic to the described character. Hedge and screening planting will generally be native to provide a sympathetic and distinguishing character to the new buildings and their setting.

- The placement of car parking areas and pathways, have in some cases been reconfigured to allow retention of individual trees. Where significant trees require removal (on recommendation of an arborist) they will be replaced with the same species. Placement of the majority of the new buildings on the playing fields has minimised the number of plantings needing to be removed and utilises existing plantings for screening.
- The Forensic Mental Health building has been placed within a landscape buffer zone, providing separation from the historic buildings around it.
- The new Acute Mental Health building and Forensic Mental Health building are both single storey constructions, which defer in scale to the two storey massing of Buildings 40 and 41, and the single storey Building 44 – Amaroo.
- The proposed palette of materials and colours are appropriately contextual, though contemporary.
- The character of the open space north of Moonya Cottage #8 (Building 36), will be altered with proposed car parking, plant compound and associated landscaping. However, the setting of this building will be generally retained and the impact minimised by the use of hedging and planting.

Issues Not Covered by the Application

Impacts to the Areas of Bloomfield Hospital outside the Redevelopment Area

Although the redevelopment is concentrated in the south-western corner of the site and the Application deals only with changes proposed to that area, there are potential impacts on the heritage values of the site as a whole. Although it is likely that many existing Bloomfield Hospital buildings will continue to be utilised for health related functions, it is noted that withdrawal of the mental health functions to the western area of Bloomfield South creates opportunities for an increase in the numbers of land managers and occupiers. The operation of a new Health campus is also likely to result in an increase in the volume of traffic and activity across the whole Bloomfield Hospital site.

Detailed Design Development

The current proposal will be further developed with additional working drawings and specification documentation as part of the construction process. There is the potential to maximise positive heritage impacts and mitigate existing negative impacts (or increase them) in later stages of design, documentation and construction. Heritage advice will be provided by David Scobie during this process. Later stages will consider:

- Detailing of external finishes on both the new and historic buildings and internal finishes and fixtures in the historic buildings. These could impact on the heritage values of the place and will be carefully specified in consultation with David Scobie.
- Interpretation opportunities exist within the proposed redevelopment to communicate the exceptional significance of the place to the community. An interpretation plan will establish the most appropriate and effective way of doing this.

Further recommendations are presented in Section 8.0.

6.2 ASSESSMENT AGAINST CMP CONSERVATION POLICIES

The CMP has a number of policies to guide management and future development of Bloomfield Hospital. It is useful to assess any proposed changes to the place against these policies. They are listed below with notes regarding the extent of their consistency with relevant CMP Policies. The Commentary provides explanatory detail for elements of the proposed development including the mitigating measures taken during the last design stage. This assessment has been made, taking into account measures for reducing the acknowledged heritage impacts and enhancing the heritage significance of the site.

POLICY No	POLICY	CONSISTENT WITH CMP POLICY?	COMMENTARY
KEY IMPLICATIONS OF HERITAGE SIGNIFICANCE			
Policy 1	*The following elements are integral to the heritage significance of the Bloomfield Hospital site and should be conserved:*		*These notes highlight the potential impact the proposed development will have on the existing heritage values and associated fabric of the site. The way the design of the proposed redevelopment responds to these values is discussed against Policies 23 – 41 (New Development).*
	1) The layout of the site including the:		
	road structure;	YES	The proposed redevelopment maintains the majority of the significant original road layout with the exception of a small section of road behind Ward 19 (Building 40), which will be interpreted in the landscaping.
	axial layout of wards and administration buildings;	YES NO	All of the buildings on the main axes (wards and administration buildings) are being retained. The bulk and extent of the proposed new hospital will compete with the strength and dominance of the main axis of Ward buildings as an element in the landscape. This affects the sense of the deliberate axial planning of the site and the spacing of the wards according to different treatment types. Reasons for the siting and design of the redevelopment are outlined in Section 5.3 of this SHI.

POLICY No	POLICY	CONSISTENT WITH CMP POLICY?	COMMENTARY
	evidence of the separation of long and short term care patients between Bloomfield North and South, by use of the institutional parkland and sporting precinct;	YES	This evidence is still maintained, although the parkland will be substantially diminished in the area of the playing fields at Bloomfield South.
	The spacing (articulation) of the buildings within the landscape to provide a setting and outlook for each, as part of the treatment of the patients. This includes the sense of space and the intimate and distant views when looking out from the wards and staff accommodation.	YES

POLICY No	POLICY	CONSISTENT WITH CMP POLICY?	COMMENTARY
	2) The buildings from the early phases of the use of the site, which show the system of control, classification, treatment and management of patients.	YES	All of the buildings from the early phase of the site will be retained, with the exception of the Male TB Ward (Building 38). It will still be possible however, to interpret the system of control, classification, treatment and management of patients.
	3) The distinctive external forms, character and fabric of the buildings from the early phases of development. These elements contribute to the institutional village character of the site.	YES	The schematic design for the buildings being reused as part of this development (Wards 18, 19 and Amaroo) (Buildings 41, 40 and 44) indicate that their distinctive external forms, character and fabric will be retained. The final specifications and design details will be developed in consultation with David Scobie, Heritage Consultant. The proposed development does not have any planned and direct impact upon the majority of the buildings from the early phases of development.
	4) The distinctive interior configurations of the buildings from the early phases of development. These reflect patient treatment and management regimes.	YES	The documentation for the buildings being reused as part of this development (Wards 18, 19 and Amaroo) (Buildings 41, 40 and 44) indicate that their distinctive interior configurations will be retained. The proposed adaptive reuse of Amaroo (Building 44) will partly reconfigure the side wings,
	5) Original and/or distinctive interior finishes, fabric and details.	To be determined	The documentation for the buildings being reused as part of this development (Wards 18, 19 and Amaroo and Buildings 41, 40 and 44) indicate they will undergo minimal change as part of this development, even though their uses will vary from the original or current. It is anticipated that the new uses will be sympathetic. A detailed review with commentary has been conducted on the proposals and recommendations provided, such as bulkheads where significant walls are removed. The final specifications will be

			developed in consultation with David Scobie, Heritage Consultant.
POLICY No	**POLICY**	**CONSISTENT WITH CMP POLICY?**	**COMMENTARY**
	6) The peaceful and tranquil atmosphere provided by the parkland setting	NO YES	The proposed development is located within one part of the Institutional Parkland. This will diminish the peaceful and tranquil setting of Wards 18, 19, Turon House, Yandina, Manara Clinic and the CRRMH (Buildings 40, 41, 46-48, and 50), though their immediate landscaped setting will be retained and enhanced. Reasons for the siting and design of the redevelopment are outlined in Section 5.3 of this SHI. Other than in the area of the proposed development, the peaceful and tranquil atmosphere provided by the parkland setting will be retained.
	7) The institutional parkland as an open space, peaceful setting for the buildings and a place for sport and recreation.	NO YES	The institutional parkland will be seriously impacted on its western side where it contributes to the setting of the main axis of former male wards. Reasons for the siting and design of the redevelopment are outlined in Section 5.3 of this SHI. Other than in the area of the proposed development, the peaceful and tranquil atmosphere provided by the parkland setting will be retained.

POLICY No	POLICY	CONSISTENT WITH CMP POLICY?	COMMENTARY
	8) The general contrast between the formality of the underlying structure (layout, paths, fences, roads) with the informal plantings, the institutional parkland and the surrounding native bushland. *(NB: It is difficult to generalise about the landscape as different areas have different characteristics. These are explored in more detail in specific policies regarding landscape character.)*	YES / To Be determined Yes	The proposed layout and landscaping of the new development will generally retain the overall contrast between the formality of the underlying structure with the informal plantings, the institutional parkland and the surrounding native bushland, even with the introduction of new built elements. The concept of the proposed landscaping is generally informal and ad-hoc, similar to existing, continuing the exotic and indigenous planting legacies found in the existing landscape. There is an increase in the density of the buildings within the site in comparison with the original Bloomfield site owing to the nature of the Brief for contemporary Hospital requirements in contrast with the original Psychiatric Health care requirements. The areas of increased density are addressed using courtyard style landscaping consistent with the traditional approach on site. Several areas are improvements where soft landscape treatments replace roads paths and concrete which have increased on the site over decades of ad-hoc modifications.
HERITAGE LISTING AND CURTILAGE			
Policy 2	*The site has been listed on the State Heritage Register in recognition of its exceptional level of heritage significance. All land managers and occupiers should be aware of this listing and the defined curtilage as well as the primary heritage curtilage and the values attached to it, to ensure a co-ordinated heritage management approach is adopted.*	To be determined	Recommended. New managers and occupiers should be made aware of the exceptional heritage values of the site, the CMP and this SHI.

CONSERVATION PRACTICE			
Basis of Approach and the Burra Charter			
Policy 4	*The implications of the statement of cultural significance outlined in Policy 1 of this Conservation Management Plan should be accepted as one of the bases for all future management decisions.*	YES	The NSW Department of Health and the Greater Western Area Health Service have adopted the CMP as a basis for managing the site and its exceptional heritage values. It is proposed that the pinnacle + healthcare consortium adopt the CMP as a basis for managing the site and heritage values.
Other Standards and Guidelines			
Policy 5	*Bloomfield Hospital site should be conserved and managed in accordance with the Minister's State Owned Heritage Management Principles and the Heritage Council's Heritage Asset Management Guidelines issued under Section 170 of the NSW Heritage Act 1977, which came into force on 1 January 2005.*	To be determined	There should be funding available from the pinnacle + healthcare consortium for conservation management and ongoing maintenance of historic buildings and landscape directly affected by the proposed redevelopment.
POLICY No	**POLICY**	**CONSISTENT WITH CMP POLICY?**	**COMMENTARY**
ONGOING MAINTENANCE			
Policy 6	*Develop an asset maintenance plan that accounts for the heritage values of the place. This should include a checklist of actions to be undertaken regularly in order to keep the buildings and landscape in good repair. Ensure adequate resources are available for implementation.*	To be determined	Recommended
Policy 7	*Maintenance and repair works should be undertaken in accordance with the policies in this plan and the minimum standards of maintenance and repair prescribed in Division 5 of the NSW Heritage Act, 1977.*	To be determined	Recommended
Policy 8	*Staff responsible for implementation of the maintenance cycle should be familiar with the policies in the CMP and the need to use traditional construction and repair techniques. Where necessary, specialists in the conservation of particular materials should be consulted and/or used to undertake the work.*	To be determined	Recommended

MANAGING CHANGE GENERAL PRINCIPLES AND REQUIREMENTS **Assess Heritage Impact Prior to Making Change**			
Policy 9	*Changes should be preceded by a heritage impact assessment, using the policies in this Plan for guidance. More substantial changes should be formally assessed in a Heritage Impact Statement by a heritage specialist prior to implementation. Recommend actions in the HIS about how to minimise or mitigate impacts should be followed.*	YES	Satisfied by this document for the current proposal.
Use Appropriate Expertise and Make Records			
Policy 10	*Where alterations, additions, demolition or new work to Bloomfield Hospital is proposed, these modifications should be developed in consultation with an experienced heritage specialist, appropriate to the nature of the work, in order to minimise heritage impacts or take opportunities to recover significance.*	YES / To be determined	Heritage advice has been sought throughout the design process to attempt to mitigate the obvious negative impacts of the proposal. This process is to continue with the involvement o David Scobie, Heritage Consultant.
Policy 11	*Technical advice and building work should only be undertaken by qualified consultants and contractors.* *Recommendations of potential consultants and contractors should be provided by the supervising heritage specialist.*	To be determined	Recommended Recommended
POLICY No	**POLICY**	**CONSISTENT WITH CMP POLICY?**	**COMMENTARY**
Heritage Approvals			
Policy 12	*Check heritage and planning approval requirements prior to undertaking any changes to the place. Obtain any necessary approvals prior to undertaking work and carry out work in accordance with any conditions placed on these approvals.*	YES To be determined	This document is part of this process. Recommended for subsequent design development and working documentation. The Department of Planning is to clarify the consent process for the remainder of the design and construction programme in order that the pinnacle + healthcare consortium may meet the requirements.
TYPES OF CHANGE			
Change of Ownership and Subdivision			
Policy 13	*If the site passes from public ownership, a heritage conservation agreement in accordance with the management principles in this Conservation Management Plan should*	Not applicable to the subject Application	

	be placed on the land title in perpetuity.		
Policy 14	*Further subdivision within the primary heritage curtilage is not recommended as this may continue to compromise the ability to manage the heritage values of the place in a cohesive way. However, regardless of the number of owners or managers, it is important that all parties are aware of the significance of the site as a whole as well as its component parts. All owners, managers and occupiers should use this Conservation Management Plan to inform decision making and be aware of cumulative changes across the site that may have unintended heritage impacts.*	Not applicable to the subject Application	
Change of Use			
Policy 15	*New and additional uses may be provided on the site as long as they are designed using the policies in this CMP for guidance in order to minimise negative heritage impacts.* *Continuation of the historic use of the site or parts of the site, while desirable, should not be used as heritage rationale to support changes that have a major negative impact on the significance of the place.*	YES NO	The CMP has been used to identify potential heritage impacts throughout the design development process and to identify possible mitigation measures. The functional requirements of modern hospital facilities have influenced the design process. Reasons for the siting and design of the redevelopment are outlined in Section 5.3 of this SHI.

POLICY No	POLICY	CONSISTENT WITH CMP POLICY?	COMMENTARY
New Services, fittings and safety and fire upgrading			
Policy 17	*Any changes to services within the existing buildings must take into consideration the heritage significance of the building and should occur in areas of lesser significance. Any opportunities to remove intrusive fabric or redundant services should be pursued. No new services should be attached to the exterior of any building. Where possible services should run under floors, in ceiling spaces or in areas where changes have previously occurred (except where changes are likely to be reversed for example re-opening an infilled verandah).*	YES Ongoing and to be determined	Fire services Consultants have confirmed that the provision of new services will have a minimal impact on the building fabric. The installation of standard detection systems has a minimal and acceptable impact on the significance of the heritage buildings. It is important to reuse existing fittings where possible and to keep fittings that have been removed for use elsewhere. Only significant fittings are to be retained and relocated. Changes to services should be detailed in consultation with David Scobie, Heritage Consultant and discussed where relevant with the NSW Heritage Council Fire, Access and Services Advisory Panel prior to finalisation of concepts and expectations to assist in minimising heritage impacts.
Policy 18	*Any changes to existing buildings for fire safety upgrades must take into consideration the heritage significance of the building and should utilise areas of lesser significance for services. Existing external fire stairs should be reconsidered, to reduce their impact upon the heritage significance of the buildings.*	Yes Ongoing and to be determined	Preliminary information on fire upgrading is available and is acceptable in the context of the impact on the heritage buildings. Fire upgrades should be detailed in consultation with David Scobie, Heritage Consultant and discussed with the NSW Heritage Council Fire, Access and Services Advisory Panel prior to finalisation of concepts and expectations to assist in minimising heritage impact. No changes are proposed to the existing fire escape staircases. Where minor changes are proposed these will be designed to have an acceptable impact.

Conservation Works			
Policy 19	*Ensure that a record of the underlying methodology for each conservation, adaptive reuse or redevelopment project is maintained including:* *• documentation of the reasoning behind major decisions;* *• records of any testing or additional research undertaken;* *• ensure that this record is appropriately archived.*	To be determined	Recommended. The archive should be kept on site in a known, safe and accessible location.
Policy 20	*Restoration or reconstruction should only be undertaken where there is sufficient evidence from documentary, archaeological or architectural sources to ensure accuracy and authenticity*	Not applicable	Restoration and/or reconstruction are not currently proposed.

POLICY No	POLICY	CONSISTENT WITH CMP POLICY?	COMMENTARY
NEW DEVELOPMENT			
General Approach			
Policy 21	*All new development proposed for the site should be planned and implemented in accordance with the policies in this Conservation Management Plan. In particular it should aim to protect and enhance conservation of the key characteristics of the site listed in Policy 1.*	Discussed Under policies 25 onwards.	
Policy 22	*New development outside the primary heritage curtilage, but inside the site curtilage should not negatively impact on the character and setting of the significant primary heritage area. Height and scale of new development, while less of an issue than within the primary heritage curtilage still needs to be considered within the context of the site as a whole.*	Not applicable	
Layout and Site Structure			
Policy 23	*Retain the existing road pattern within the primary heritage curtilage. Changes to this road pattern and the addition of new access points should be minimised and should only occur where they do not compromise understanding of the original structure and function of the site.*	YES	The existing significant road structure is largely unaffected by proposed redevelopment. The new road structure being introduced within the redevelopment area is clearly associated with the new precinct and does not detract from an understanding of the original layout of the site. An element of Canobolas Drive will be subsumed within the new soft landscape. The alignment will be interpreted within this landscape.
Policy 24	*Maintain existing open spaces within the primary heritage curtilage and the separation of the buildings and clusters of buildings within the parkland setting. New buildings and features should be designed in a way that does not compromise understanding or experience of the original layout and setting of the site, or have a major negative impact on the key heritage values of the place described in the Statement of Significance and Policy 1.*	NO	The proposed development has a substantial impact upon the existing open spaces north and south of Ward 18 and 19 (Buildings 41 and 40). Reasons for the siting and design of the redevelopment are outlined in Section 5.3 of this SHI.
Policy 25	*Do not attempt to replicate or augment the strong axes of buildings, particularly those at Bloomfield South.*	YES	

POLICY No	POLICY	CONSISTENT WITH CMP POLICY?	COMMENTARY
Landscape Setting and Context			
Policy 26	*The introduction of any new land scaping schemes and features should not detract from the heritage significance of the place and its institutional village and institutional landscape character. In particular:*		
	• the generally informal character of the plantings in contrast to the more formal underlying layout should be continued. The only exception to this are the formal rows of trees from the first phase of planting marking boundaries within the site and the formal hedges associated with the airing courts. These should be replaced as the individual trees die off;	YES	The proposed landscaping scheme is informal within a broad context and formal within the dense built context. It does continue the pattern of using rows of trees to define and/or enclose areas of the grounds. Replacement of the inner row of cottonwood in the avenue along Forest Road is proposed as they are in poor health. The proposed landscaping in the courtyards of the new development will complement the existing planting regime on the site, using a mix of exotic and indigenous species, in a combination of informal layout and appropriate scales for shade and groundcover.
	• the regime of planting exotic species and eucalypts as specimen trees in the parkland areas within the primary heritage curtilage should be continued in preference to formal gardens;	YES	The proposed landscape concept and suggested planting list focus on informal groupings and specimen trees drawn from selected native and European stock in keeping with the existing landscape character and tradition of planting on the site.
	• use native species for new plantings in the areas outside the primary heritage curtilage.	Not applicable	
	• continue to define areas of the site by using plant material or terraced banks, rather than fences and walls.	YES	Hedges, border planting and the use of rows of trees to screen or define areas of the site are continued in the landscape concept for the redevelopment.
	• kerbing and guttering of roads within the primary heritage curtilage should be kept to a minimum and continue to use materials and finishes that are soft and informal in effect and appropriate to the village character of the site.	Yes, and ongoing to be determined	Recommended. The current proposal employs harder landscape elements (kerbing and guttering etc.) surrounding the new development, but does not affect the character of the landscaping surrounding the existing buildings or the rest of the site.

POLICY No	POLICY	CONSISTENT WITH CMP POLICY?	COMMENTARY
Policy 27	*Refurbishment or new development should take the opportunity to:*		
	• *investigate and where appropriate, reinstate the plantings within the airing courts to the ward buildings across the site and around the main administrative and service buildings using archival and archaeological evidence as a basis;*	NO	There is no current proposal to reinstate the gardens established in the airing courts from the 1930s to the 1960s. The remnant landscaping will be retained. It will be possible to reinstate these areas in the future if desired. The establishment of two memorial gardens in front of Clinical Services – building 41 and Administration – building 40 is recommended as part of the Interpretation strategy.
	• *where possible, reinstate more hedging and specimen topiary trees, from the early stages of the development of the hospital using archival evidence as a basis.*	YES	The areas where hedging is proposed has been increased to provide greater screening between service areas and general circulation spaces. No archival evidence is available to date relating to the use of hedging in the vicinity of the original buildings other than the early aerial photo illustrating planting out of the airing courts north of the Ward blocks.

Buildings and Structures			
Policy 28	*Minor alterations to, or adaptive reuse of most buildings on the hospital site, particularly those actions that recover significance, are appropriate as long as the original configuration, external character, and significant fabric is retained, evident or appropriately interpreted. As these are integral to the heritage significance of the buildings and the site as a whole.*	YES/To be determined Yes	The documentation for the buildings being reused as part of this development (Wards 18, 19 and Amaroo) (Buildings 41,40 and 44) indicate that in general, their original configuration, external character and significant fabric is retained, evident and/or interpreted. The entry steps to the Administration building were to have been demolished. An alternative has been developed which retains the entry with reconstructed steps and a ramp to the retained axial landing. A similar layout for an integrated ramp and steps has also been developed for the Clinical Services building. The final specifications should be developed in consultation with David Scobie, Heritage Consultant.
Policy 29	*Generally, the existing landscaped settings of each building should be retained, particularly for the administrative and ward buildings. Garden views were integral to the original philosophy of treatment of psychiatric patients and are directly linked to the heritage significance of these buildings and should be retained.*	YES NO	The intimate views to and from the significant buildings within the redevelopment area are retained by the current proposal. Middle and some distant views will be removed or seriously constrained particularly to the north. Reasons for the siting and design of the redevelopment are outlined in Section 5.3 of this SHI.
Policy31	*The original and any other primary uses of each building on the hospital site and their role in the provision of mental health services should be interpreted.*	To be determined	Recommended
Policy 32	*Alterations and additions to buildings should be constructed in materials that do not have a negative impact on the significance of the original fabric, with forms and details, which respect and complement the existing fabric. There should be some distinction between new and old fabric, between new additions and the original building.*	Not applicable	The schematic designs for the buildings being reused as part of this development (Wards 18, 19 and Amaroo) and (Buildings 41, 40 and 44) indicate that there are no external additions planned. Minor alterations are dealt with in the next table covering conservation policies for individual buildings.

P0LICY No	POLICY	CONSISTENT WITH CMP POLICY?	COMMENTARY
Policy 33	*Where possible, large internal spaces should be used in a manner that retains the existing scale of the space without subdivision. Where subdivision into smaller spaces is necessary, these works should be reversible and/or allow interpretation of the bigger space.* *Similarly, creating larger spaces from smaller ones by removing walls should also be avoided or kept to a minimum with interpretation of the individual. spaces.*	YES / To be determined	The documentation for the buildings being reused as part of this development (Wards 18, 19 and Amaroo) (Buildings 41, 40 and 44) indicate that some large spaces will be subdivided into smaller areas. It is recommended that these works be reversible and the existing configuration recorded prior to construction. Similarly, some larger spaces in Amaroo (Building 44) are proposed to be created from smaller ones by removing walls, but this is kept to a minimum, and remnant wall elements will be retained to interpret the original configuration. Minor alterations are dealt with in the next table covering conservation policies for individual buildings.
Policy 34	*Original and early interior fittings and finishes should be retained. New interiors should be in a style that suits the era of the building, but is clearly new and different. New interiors should be of a high quality in material and workmanship.*	To be decided	Strongly recommended
Views and Vistas			
Policy 35	*New development should avoid intrusion on the outlook or views from the early buildings. In particular it should not create enclosure where there is currently an open outlook from these buildings.*	YES NO	The gardens and airing yards of the wards immediately adjacent to the new redevelopment (Wards 18 and 19) (Buildings 41 and 40) will be retained, as will the intimate views between the buildings. Middle and some distant views and the sense of space in the western half of Bloomfield South will be impacted. Reasons for the siting and design of the redevelopment are outlined in Section 5.3 of this SHI.
Signage			
Policy 36	*Any new signage should be low key and designed in a scale and style that does not have a negative impact on individual buildings or their setting. The existing names of streets within the site should be retained.*	To be determined	Recommended

P0LICY No	POLICY	CONSISTENT WITH CMP POLICY?	COMMENTARY
Archaeology			
Policy 37	*Archaeological evidence relating to the former airing yards and formal gardens will supplement the historical record and thus should be used to inform any reconstruction of these areas. Archaeological evidence in these areas should not be impacted without being recorded first, by a qualified historical archaeologist.*	Not Applicable at this time Yes	Recommended if re-landscaping is proposed. Recommended: An historical archaeologist is to provide advice in conjunction with the Heritage Consultant during the construction period and for the excavation of the transects and analysis.
Policy 38	*While the remaining archaeological resources within the site form part of the record of its physical development, their contribution to the significance of the site as a whole is low. There is no need to undertake archaeological recording except as specified in Policy 40 and as outlined below:* *• work carried out in the area around the original wooden huts in the eastern part of the site should be mindful that it may contain subsurface deposits relating to the early development and use of the hospital. If such evidence is located it should be recorded by a qualified historical archaeologist. This evidence may include postholes, artefact deposits, landscape features and building footings.* *• work undertaken in the area of the playing fields should be mindful that it may contain landfill with potential to contain artefacts relating to early life in the hospital. If such evidence is located it should be investigated and possibly recorded by a qualified historical archaeologist.*	Not applicable To be determined	Recommended Recommended: An historical archaeologist is provide advice in conjunction with the Heritage Consultant during the construction period and for the excavation of the transects and analysis.
Moveable Heritage			
Policy 39	*Moveable heritage within the site should be identified, catalogued, conserved, managed, interpreted and retained on the site even if the use of the site or individual buildings changes.*	To be determined	Recommended

P0LICY No	POLICY	CONSISTENT WITH CMP POLICY?	COMMENTARY
HERITAGE INTERPRETATION			
Policy 40	*Prepare and interpretation strategy and implement it in order to interpret the history and significance of the site as a whole and its layout, original planning intention, individual buildings and spaces, as well as the daily lives of its occupants and staff.*	To be determined	Recommended to be included in new development. The two Heritage garden areas in front of the Administration and Clinical services buildings are to be interpreted and named appropriately.
Policy 41	*Prepare an oral history as a matter of urgency to record the important stories about the site and use this to inform interpretation.*	To be determined	Recommended
USE OF THIS PLAN			
Policy 41	*The NSW Department of Health should accept and adopt this plan as a basis for ongoing management and for planning any future changes to the Bloomfield Hospital site.*	YES	The NSW Department of Health and the Greater Western Area Health Service have adopted the CMP as a basis for managing the site and its exceptional heritage values.
Policy 43	*The NSW Department of Health should submit this Plan to the NSW Heritage Office for information, so that it may be used to guide future decisions about the place.*	YES	The current proposal and accompanying SHI is being submitted to the NSW Heritage Office.
Policy 44	*The NSW Department of Health should review this Plan at five-year intervals or whenever critical new information comes to light as a result of further research or physical work.*	Not applicable	
Policy 45	*This Plan should become a public document and should be distributed to the following repositories:* *• relevant staff at Bloomfield Hospital, in particular those responsible for day to day management and for planning changes to the place;* *• the area health office;* *• Department of Health head office;* *• Orange library and Orange Council Offices;* *• NSW Heritage Office.* *In addition, in accordance with the obligations of Premier's Memorandum No 2000-15, copies of the Plan should also be lodged with* *• State Library of NSW (2 copies)* *• Parliamentary Library of NSW (1 copy)* *• University of Western Sydney Library (1 copy)* *• National Library of Australia (1 copy).*	Not applicable for SHI	Not Applicable for SHI

6.3 IMPACT OF PROPOSED DEVELOPMENT ON SPECIFIC ELEMENTS

The CMP provided detailed recommendations with regard to the future treatment, management and conservation of specific elements of the site, which have been used in this report to assess heritage impact, with commentary on the degree and type of impact if relevant.

A – BLOOMFIELD SOUTH

SIGNIFICANCE
EXCEPTIONAL

CONSERVATION POLICIES

- The road pattern should be maintained without augmentation as it is a key structural element and is integral to the significance of this part of the site. It provides the basis for the original design intention for the site.
- New formal structural elements including roads, hard edges for roads and garden beds, pathways, fences, new hedges should not be introduced unless otherwise specified below.
- All open spaces in this part of the site should be maintained as open space unless otherwise specified below. They are key contributors to the setting of the buildings, the spacing of the buildings and the peaceful village-like atmosphere on the site.
- The informal character of the plantings in contrast to the more formal structure of this part of the site should be maintained, as this is a characteristic Bloomfield feature. The use of introduced plant species should be continued where plants need to be replaced in the future, as this pattern of planting is also distinctive feature of this part of the site.
- The formal airing courts at the front of the main axis of wards could be reinstated using photographic evidence. If reinstatement is not possible in the short term, retaining the archaeological remnants of the former airing courts would allow for reconstruction in the future. Imposing a new landscaping design on this area would negatively impact its significance. New landscaping following the pattern, scale and style of the original gardens in this location would enhance the immediate setting for the main ward blocks.
- The introduction of new buildings in the two large open spaces to either side of the administration axis and at the rear of the main ward axis would be possible provided that:
    - the buildings are no larger in height and scale than the surrounding original wards;
    - the buildings are placed at the edges of the open space addressing the existing roads;
    - an area of open space is maintained in the centre of the buildings;
    - original enclosed airing courts are not impacted by new built forms;
    - hard landscaping is not introduced between or behind the new buildings.
- The significant views from the main male ward buildings over the airing courts to the playing fields and the institutional parkland and distant rural landscape should be retained unobstructed by built forms or denser plant screening.
- It is important to maintain the closer views from the main female wards across the airing courts to specimen trees with bushland behind.

PROPOSED WORKS

- Construction of new infrastructure and buildings linked to the new 1-3 storey General Hospital and Acute Mental Health building on the playing fields north of Wards 19-15 (Buildings 40, 41,46-48, 50), plus the new Forensic Mental Health building north of Canobolas Clinic (Building 56).
- Construction of a car park for the Blood Bank and a service bay and loading facility for the oxygen tank

COMMENT ON IMPACT AND RECOMMENDATIONS

The existing road pattern is maintained with the exception of a length in front of the new Acute Mental Health building. Interpretation is provided within the landscape for this link. The additional roads along the western edge of the site provide access to the new hospital development and link this with The Crescent. It is proposed that these roads are kerbed and guttered and subsequently distinguishable from the less formal nature of the existing road system.

The proposed Blood Bank car park and Oxygen facility are in a prominent location. Design development of these two elements will be required to ensure that the impact is acceptable. Suitable screening trees are indicated to the car park and it is also screened by the landscaped island. A direct view however from the west will see the Oxygen facility exposed. There is no alternative site for these two elements as they need to relate to the main road and the Blood Bank, appropriate screening and design for the enclosures is essential.

- **Design development of the enclosures for the Oxygen Tank and meters is required to ensure that they are visually recessive and of a consistent set of forms and materials with other minor new structures;**
- **If the colour of the tank is flexible it should be Dulux Lead Colour or similar and the screen fencing to be reasonably opaque for screening – close steel palisading for example;**
- **Additional tree and shrub planting will be required both within the site and external to the site between the existing trees to ensure that the two elements are not visible from the main road.**

One section of Canobolas Drive will be lost between Ward 19 – Administration (Building 40) and Clinical services (Building 41) and the new Forensic Mental Health building though the existing alignment will be interpreted through the landscape treatment for this area through the use of surface materials and plantings.

- **Details have now been developed as a result of the advice and are included within the Appendix of drawings.**

The proposed development includes the addition of new formal structural elements including hard edged roads, primarily to the western edge of the site, covered pathways and ramps linking new and existing buildings, and fences enclosing yards linked to the new mental health facilities. Most of these new elements are occurring in an area of new development, will be obviously different and contrasting to the existing character of the site generally and as such will have limited impact on the overall heritage significance of the site.

- **Hedges are proposed to be used in the new landscaping related to the new buildings, primarily as dividing or edging elements, in a manner evocative of the traditional use of hedging over the site. The species however will be selected natives so as to provide a sympathetic distinguishing element within the landscape.**

Existing roads will remain informal as existing, with no kerbing and guttering.

One open space in Bloomfield South will be lost due to the construction of a new Forensic Mental Health building between Canobolas Clinic (Building 56) and Ward 19 (Building 40). This area currently contains the green house and associated structures – 65, 66, 67 and gardens and the orchard and is indicative of the self-sufficient nature of Bloomfield Hospital in the past. Other than the loss of this open space, the development of this new structure will have limited impact on the surrounding buildings and landscape.

The character of the open space north of Moonya Cottage # 8 (Building 36) will be altered with proposed car-parking, future Ambulance Station and associated landscaping. However, generally

the setting of this building will be retained and any impact will be minimised by landscaping. The proposed Ambulance Station site will have a substantial negative impact upon the Moonya Cottage and this project will need to be the subject of future study, options and assessment.

- **As a result of the advice an alternative location has been provided for the Ambulance Station which is closer to the Hospital and distant from the main heritage buildings.**

All other open spaces in this part of the site will be maintained as open space, generally contributing to the setting of the buildings, the spacing of the buildings and the village-like atmosphere on the site.

The proposed additional plantings in this part of the site are generally informal, similar to existing, continuing the existing contrast to the more formal structure of this part of the site.

The design intent of the proposed landscaping generally reflects the exotic and indigenous planting legacies found in the existing landscape.

The proposed development does not include reinstatement of the formal airing courts at the front of the main axis of wards at this stage, or removal of any archaeological remnants of the former airing courts.

The proposed development does not include any changes to the existing landscaping of these areas, even in the instances where the adjoining buildings are proposed to be reused.

The significant views from the main male ward buildings over the airing courts to the playing fields and the institutional parkland and distant rural landscape will be significantly altered by the construction of a new 1-3 storey General Hospital and the single storey Acute Mental Health building on the playing fields north of Wards 19-15 (Buildings 40, 41, 46-48, 50). Screening trees assist in retaining the formal shape of the airing courts in front of Clinical Services – building 41 and Administration – building 40.The loss however, of the open space provided by the playing fields is a major negative heritage impact which cannot be off-set.

B – INSTITUTIONAL PARKLAND

SIGNIFICANCE
EXCEPTIONAL

CONSERVATION POLICIES

- Maintaining this area without introduction of extensive or numerous built forms is important in order to maintain its character as institutional parkland and visual and atmospheric setting for the main axis of wards at Bloomfield South.
- New buildings and newer landscaping styles introduced into this area could have a marked and negative impact on the heritage significance of the site as a whole and would irreversibly change its character. If they are introduced at all (which is not preferred) low scale, very well spaced and well-articulated forms would assist to reduce the level of impact.
- The use should ideally remain sport and leisure related. Upgraded sporting facilities could be developed but should remain at a similar scale to those already there.
- This area was designed to provide a functional separation between different types of treatment of patients at the hospital and itself play a restorative role in their treatment. Views between the parkland and the main ward groupings should be retained.

PROPOSED WORKS

- Plantings are proposed to screen the new built elements. New works consist of infrastructure and buildings linked to the new 1-3 storey General Hospital and single storey Mental Health

building on the playing fields north of Wards 19-15, (Buildings 40, 41, 46-48, 50) with associated car parking, landscaping and infrastructure.

COMMENT ON IMPACT AND RECOMMENDATIONS

The proposed construction of a series of linked hospital buildings up to 3 stories high on the playing fields north of Wards 19-15 (Buildings 40, 41, 46-48, 50) will have a negative heritage impact upon the institutional parkland. The important role of this area in providing a visual and atmospheric setting for the main axis of wards at Bloomfield South will be lost for the western half of the axis as this is the location of the new hospital buildings. This development will irreversibly change the character of this area and the heritage significance of the site as a whole.

The Institutional parkland area is large and while the development will diminish the size of the parkland, large areas of parkland will remain, including the golf course, oval and the wooded region between the eastern half of Bloomfield South and Bloomfield North.

The proposed construction of a series of linked hospital buildings on the playing fields north of Wards 19-15 (Buildings 40, 41, 46-48, 50) will change the use of this area from sport and leisure related to hospital use. However, much of the institutional parkland will remain, including the golf course, oval and the wooded region between the eastern half of Bloomfield South and Bloomfield North.

The functional separation between different types of treatment of patients at the hospital will still be evident and views from many buildings to soft landscaped areas will still be possible.

Views between the sporting precinct and the main ward groupings will be lost on the western side of the main axis of Bloomfield South, though these buildings will retain intimate landscaped views.

WARD 20 - (Building 38)

SIGNIFICANCE
As part of the complex of buildings on the Bloomfield Hospital site, Ward 20 (Building 38) has EXCEPTIONAL heritage significance.

Individually, Ward 20 (Building 38) has EXCEPTIONAL heritage significance.

CONSERVATION POLICIES

- Considering the exceptional heritage significance of Ward 20 (Building 38), and its degree of intactness and integrity, this building should be conserved. All original fabric including internal and external finishes should be retained. Furthermore, the building is an extremely rare extant example of a Tuberculosis Ward in a mental hospital in NSW, as most other examples seem to have been demolished. Conservation works to this building should include replacement of all glazing in the building, restoration of the painted glass panels in the rear of the building and could consider reinstating the chain wire screens to the verandahs.
- Considering its integrity and distinctive external and internal character, the building should not have any additions. Minor adaptive reuse of the building is acceptable as long as the original plan form and character is retained, as this is integral to the heritage significance of the buildings. Subdivision of large spaces should be avoided. All modifications should be reversible.
- The existing landscaped setting of Ward 20 (Building 38) should be retained, in particular the soft landscaped views from the side wings and courtyard as this relates to the original design of the building to provide calming garden views for the patients, as well as providing a

suitable context for the building. It is not essential to retain the existing fence enclosing the courtyard, as long as this sense of enclosure is interpreted in any revised landscape.

- Ward 20 (Building 38) could accommodate a range of low-key uses, such as office, commercial, administrative or educational uses. The building could also possibly be used for low-impact recreational uses, such as a café or restaurant, making the most of the long verandahs and northern courtyard. Other uses may be acceptable if any necessary works do not have a major impact on significant configuration or fabric.
- The original use of the building and its central role in the provision of mental health services on the Bloomfield Hospital site should be interpreted, particularly its role providing accommodation and treatment for tuberculosis psychiatric patients, part of the complex system of assessment and management of patients and related administration and services of the hospital. The building also provides a good opportunity to explain the treatment of TB during the early 20th Century, as this is clearly evident in the building form, fabric and configuration.

PROPOSED WORKS

- Demolition of Ward 20 (Building 38) and inclusion of this site into a new car park for the hospital redevelopment.
- Archival recording, oral history and Interpretation are proposed.

COMMENT ON IMPACT AND RECOMMENDATIONS

The demolition of Ward 20 (Building 38) is a major negative heritage impact, considering its degree of rarity, integrity and intactness.

- Significant original fabric, including joinery should be salvaged for reuse in works to other heritage buildings on the site or retained for future reuse. The identification of appropriate significant items and their locations for the items to be re-used are yet to be determined.

- The original painted glass panels should be retained and reused within the new hospital development in conjunction with detailed interpretation about this building. The panels are not within the TB Ward building and have been removed to a site unknown to current site custodians. When and if they are returned, the locations for the items to be re-used will be determined.

- Detailed archival recording of this building is proposed, including measured drawings, photographic and video recording. All existing windows hoarding are be removed prior to any recording.

- These archival records should be compiled with historic records, including copies of original plans, subsequent plans, historic photographs etc. Sets of these documents should be stored on site in a location to be determined, as well as an appropriate off-site location such as Orange City Library.

As Ward 20 (Building 38) is proposed to be demolished, there are no proposed additions or adaptive reuse.

As Ward 20 (Building 38) is proposed to be demolished, the existing landscaped setting and landscaped views will be lost. These aspects will be included in the archival recording.

It is recommended that interpretation of the whole of the Bloomfield site, as well as each relevant component be included as part of the development. The final brief and form of the recording is to be determined.

The Proposal for the oral history and video recording is included within the Appendix.

WARD 19 - (Building 40)

SIGNIFICANCE
As part of the complex of buildings on the Bloomfield Hospital site, Ward 19 (Building 40) (Building 40) has EXCEPTIONAL significance.

Individually, Ward 19 (Building 40) has EXCEPTIONAL heritage significance.

CONSERVATION POLICIES

- Ward 19 (Building 40) should be conserved, as a highly intact example of an Interwar institutional building in a modest domestic style, typical of most buildings on the Bloomfield site, and displaying the principal characteristics of the typical ward buildings on the site. This building has a very high degree of integrity in terms of external form, internal configuration and fabric. All existing original internal and external fabric and finishes should be retained.
- The existing landscaped setting of Ward 19 (Building 40) should be retained, in particular the soft landscaped views towards the north. The hard surfaces of the southern courtyard should be retained or interpreted, as this relates to the service nature of this space. Consideration should be given to reinstating or interpreting the original airing yard for this ward.
- The preferred use for Ward 19 (Building 40) is for health-care as this was its original use. However, Ward 19 (Building 40) could accommodate a range of low-key uses, such as office, commercial, administrative or educational uses. The building could also possibly be used for residential and related uses, such as hotel accommodation. Any uses of the building should have limited impact on significant configuration or fabric.
- The original use of the building and its central role in the provision of mental health services on the Bloomfield Hospital site should be interpreted, particularly its role providing long-term accommodation and treatment for unrecovered male patients, part of the complex system of assessment and management of patients and related administration and services of the hospital.
- Opportunities to interpret the original airing yard will be investigated with the Landscape Architects. Plans currently indicate Heritage gardens.

PROPOSED WORKS
Proposed redevelopment of Ward 19 (Building 40) for use for Administration.

- An interpretation plan is to be prepared and it will include the building.

Demolition

- The front steps are to be demolished and reinstated with an integrated ramp.
- Existing eastern toilets are to be upgraded.
- The central toilets are to be demolished and replaced.
- Rear door is to be infilled from rear central toilet block
- A set of existing walls in the ground floor eastern wing are to be demolished.
- The existing kitchen in the rear eastern wing ground floor is to be stripped out.
- The passage linen store in the rear western wing ground floor is to be demolished.
- On the first floor, the existing door openings opposite each stair are to be moved and widened.
- In the west wing two ward dividing walls are to be demolished.
- The rear passage linen store is to be demolished.
- In the rear of the east wing, the kitchen area is to be demolished.

New Works

- The new ground floor partitions are lightweight construction and reversible

- The first floor partitions are lightweight and reversible with offices utilising open layouts in the eastern wing.
- The Comms Room may compromise the fireplace and chimney breast.
- A covered walkway is proposed between buildings 40 and 41 to link the Hospital with the Mental Health buildings.

COMMENT ON IMPACT AND RECOMMENDATIONS
The proposed development involves the conservation of Ward 19 (Building 40) with some minor changes to provide suitable facilities for administrative purposes, including upgrading of services.

The proposed works are sympathetic to the existing building, and involve no external additions, no new external openings and no changes to the existing configuration. In further design development and construction, it is recommended that the following works require review to develop alternatives which do detract to the same extent form the significance:

- The front steps are significant and may be demolished provided as indicated a new ramp can be integrated. The alternate means of ramping the entry access is preferable, and is similar to that proposed at the adjoining Clinical services Building
- Bulkheads and nib walls are to be retained for all walls of original significance, which are proposed for demolition.
- **The demolition of the passage linen stores on the ground and first floors of the west wing serves no clear purpose and should be reconsidered with the closets retained.**
- **The ground floor external steps into the central toilet block are now to be retained even though the door is to be infilled with a suitable detail. Demolition serves no useful purpose and requires extensive making good.**
- **Details of the EDB proposed in the Comms Room on the first floor of the east wing are to ensure that the chimney breast and fireplace are not compromised by enlarging the room if necessary.**
- **Schematic drawings are included for the design of the covered walkway. The scale, skillion form and materials will have an acceptable impact. The design will require further development to review a recommendation that the openings to the heritage gardens are framed with the M1 masonry wall panel which is the heritage element repeated in the new works.**

David Scobie will provide Heritage Consulting advice and will be involved in further detailed design development of this building, as well as during documentation and construction.

The immediate landscaped setting of Ward 19 (Building 40) is to be retained, including the existing area of the airing yard to the north. Immediately beyond the former airing yard is the new hospital development, involving complete loss of all soft landscaped views towards the north from the middle distance.

- The Landscape works include the adaptive re-use of the airing areas for paired heritage gardens;
- Screen planting is indicated to provide a sense of enclosure to both spaces
- **Additional screen planting has been recommended to the view facing the proposed Acute Mental health building. Revised plans indicate that this has been provided;**
- Interpretation elements as part of the comprehensive Interpretation Plan are recommended to mark and celebrate the Bloomfield history, staff and patients

The hard surfaces of the southern courtyard will not be entirely retained, though the area will have gravel surfaces to reflect the areas former service nature, with small trees to provide increased amenity. Areas of concrete will be replaced with more appropriate landscape finishes thus enhancing the heritage significance.

- The Landscape Plan illustrates a fine decomposed granite gravel surface with Concrete pads to anchor the fixed bench seats and specimen shade trees
- **A minor modification has been recommended to retain the stairs and is now indicated.**

The proposed development does not reinstate or interpret the original airing yard for this ward, though this could be incorporated at a later date.

The proposed use of Ward 19 (Building 40) for administration is acceptable as it is a low-key use that is likely to involve very limited changes to configuration or fabric.

WARD 18 – (Building 41)

SIGNIFICANCE
As part of the complex of buildings on the Bloomfield Hospital site, Ward 18 (Building 41) has EXCEPTIONAL significance.

Individually, Ward 18 (Building 41) has HIGH heritage significance.

CONSERVATION POLICIES

- Ward 18 (Building 41) should be conserved as a highly intact example of an Interwar institutional building in a modest domestic style, displaying the principal characteristics of typical ward buildings on the site. This building has a very high degree of integrity in terms of external form, configuration and fabric. All existing original internal and external fabric and finishes should be retained. Conservation works should include the removal of verandah infilling on the northern façade.
- Minor alterations to, or adaptive reuse of the buildings is appropriate as long as the original plan form and character is still evident, as this is integral to the heritage significance of the building. Minor additions could possibly occur to the end elevations, but should not be considered for the north elevation or southern courtyard. Any additions to the ends of the building must be minor to respect the pattern of distinct landscaped spaces between each building. Subdivision of large internal spaces should be avoided if possible and should be reversible if required.
- The existing landscaped setting of Ward 18 (Building 41) should be retained, in particular the soft landscaped views towards the north. The hard surfaces of the southern courtyard should be retained or interpreted, as this relates to the service nature of this space. Consideration should be given to reinstating or interpreting the original airing yard for this ward.
- The preferred use for Ward 18 (Building 41) is for health-care as this was its original use. However, Ward 18 (Building 41) could accommodate a range of low-key uses, such as office, commercial, administrative or educational uses. The building could also possibly be used for residential and related uses, such as hotel accommodation. Any uses of the building should have limited impact on significant configuration or fabric.
- The original use of Ward 18 (Building 41) and its central role in the provision of mental health services on the Bloomfield Hospital site should be interpreted, particularly its role providing long-term accommodation and treatment for patients, part of the complex system of assessment and management of patients and related administration and services of the hospital.

PROPOSED WORKS

- Proposed redevelopment of Ward 18 (Building 41) for use as a Clinical Services Mental Health facility.
- Proposed development of new hospital buildings immediately to the north of Ward 18 (Building 41).
- An interpretation plan is proposed.

Demolition

- Original stairs were proposed for demolition as part of provision of a ramp on the front elevation west wing and an alternative is currently proposed.
- Existing toilets and walls are to be demolished in the front west wing.
- Provision of single door openings in walls in the west and south wings.
- Demolish central office fitout
- Demolish central toilets, walls and boiler room and services.
- Remove wall and fitout in rear corner of east wing on first floor.

Works

- Verandah at front on east wing is to be fitted out and occupied with work stations. The enclosed verandah was an unfortunate alteration previously constructed.
- The new ground floor partitions are lightweight construction and reversible
- The first floor area is not to be used at this time

COMMENT ON IMPACT AND RECOMMENDATIONS

The proposed development involves the conservation of Ward 18 (Building 41) with some minor changes to provide suitable facilities for use as a Clinical Services Mental Health facility. The proposed development includes reuse of the whole of the ground floor only with no work in the rest of the building with the exception of service upgrades.

The proposed works are sympathetic to the existing building and involve no external additions, no new external openings and minor changes to the existing configuration. In further design development and construction, it is recommended that as much of the original fabric and finishes must be retained as possible, including joinery such as fireplaces.

David Scobie, Heritage Consultant will be involved in further detailed design development of this building, as well as during documentation and construction.

A detailed recording of the existing configuration of the building, including measured drawings and photographic recording will be carried out before any works commence.

The proposed works involve retention of much of the original plan form of the building, as well as much of its original fabric and finishes. Minor reconfiguration is occurring within the existing ground to accommodate offices and consulting rooms.

No external additions to the building and no new openings are proposed. Minor covered walkways are proposed although no details are currently available. Some minor internal subdividing walls are proposed, and these are to be reversible, and any walls that are proposed to be demolished must be evident if possible, with the retention of nib walls and similar devices.

The proposed works are sympathetic to the existing building, and involve no external additions, no new external openings and no changes to the existing configuration. In further design development and construction, it is recommended that the following works require review to develop alternatives which do detract to the same extent form the significance:

- An alternative to the demolition of the front stairs through relocating the ramp has been recommended and adopted.
- Bulkheads and nib walls are to be retained for all walls of original significance, which are proposed for demolition.
- **It would be preferable not to occupy the front eastern verandah but to restore the verandah to match the western side. This option has been reviewed however in meeting the brief for mobility access no satisfactory alternative exists and the enclosed area is to be retained. A suitable colour scheme for the fenestration will be developed to ensure that the infill is visually recessive.**

The immediate landscaped setting of Ward 18 (Building 41) is to be retained, including the existing area of the airing yard to the north. Immediately beyond the former airing yard is the new hospital development, involving complete loss of all soft landscaped views towards the north from the middle distance.

The hard surfaces of the southern courtyard will not be entirely retained, though the area will have gravel surfaces to reflect the areas former service nature, with small trees to provide increased amenity.

- The Landscape works include the adaptive re-use of the airing areas for paired heritage gardens;
- Screen planting is indicated to provide a sense of enclosure to both spaces
- **Additional screen planting has been recommended to the view facing the proposed Acute Mental health building and the drawings indicate adoption;**
- Interpretation elements as part of the comprehensive Interpretation Plan are recommended to mark and celebrate the Bloomfield history, staff and patients

The proposed development does not reinstate or interpret the original airing yard for this ward, though this could be incorporated at a later date if possible.

- The Landscape Plan illustrates a fine decomposed granite gravel surface with Concrete pads to anchor the fixed bench seats and specimen shade trees.

The proposed use of Ward 18 (Building 41) for use as a Clinical Services Mental Health facility is appropriate as this is very similar to its original use and likely to involve very limited changes to configuration or fabric.

DENTAL CLINIC – (Building 45)

SIGNIFICANCE
As part of the complex of buildings on the Bloomfield Hospital site, the Dental Clinic (Building 45) has LITTLE significance.

The building has NEUTRAL heritage significance.

CONSERVATION POLICIES

- Considering its limited heritage significance, conservation of the Dental Clinic (Building 45) is not essential. If required, this building could be demolished. Alterations and additions could be carried out, as long as they do not impact on the heritage significance of Amaroo (Building 44), the adjoining landscape or the site overall.
- The existing setting of the Dental Clinic (Building 45) should be retained, as this landscaped setting contributes to the building's limited heritage significance.
- There is no preferred use for the Dental Clinic (Building 45) though a continuation of its existing use is appropriate as this relates to the overall use of the site. Nonetheless, other low-key uses could be considered.
- The current use of the Dental Clinic (Building 45) should be interpreted, as it relates to the diverse provisions of services on the site, necessary requirements for the effective provision of mental health treatment.

PROPOSED WORKS

- No works proposed.
- Amaroo (Building 44), the adjoining building, is proposed to be adapted for use as Rehabilitation
- Mental Health facility, involving no external additions.

COMMENT ON IMPACT AND RECOMMENDATIONS
The proposed development of Amaroo (Building 44) for use as a Rehabilitation Mental Health facility will have no impact on the landscaped setting of the Dental Clinic (Building 45).

An interpretation plan will be prepared for the whole of the Bloomfield site, as well as each relevant component be included as part of the development.

AMAROO – (Building 44)

SIGNIFICANCE

As part of the complex of buildings on the Bloomfield Hospital site, both Amaroo (Building 44) and Audley Clinic have EXCEPTIONAL significance.

CONSERVATION POLICIES

- Individually, both Amaroo (Building 44) and Audley Clinic have EXCEPTIONAL heritage significance. Both Amaroo (Building 44) and Audley Clinic should be conserved, as they have exceptional heritage significance as relatively intact examples of Interwar institutional buildings in a modest domestic style, with a substantial level of integrity and intactness, including the majority of the original configuration and much original fabric.
- All original fabric including internal and external finishes should be retained. Conservation works for Amaroo (Building 44) should include the removal of verandah infilling and the plant room extension to the central north wing.
- While additions should be avoided, minor alterations to, or adaptive reuse of these buildings may be appropriate as long as the original plan form and character of the building is retained. Minor additions could possibly occur to the ends and side of the southern wings, but should not be considered for the courtyards. In any possible development of this building, the principal form must be retained, as well as any original or early internal fabric. Subdivision of large internal spaces should be avoided if possible and should be reversible if required.
- The existing landscaped setting of both Audley Clinic and Amaroo (Building 44) should be retained; in particular the soft landscaped southern courtyards, as this was designed to provide a secure space and a pleasant outlook for the patients. Consideration should be given to reinstating or interpreting the original airing yard for this ward, rather than the existing configuration
- The preferred use for both Audley Clinic and Amaroo (Building 44) is for health-care as this was their original use, being designed to accommodate male and female epileptic patients. However, both these buildings could accommodate a range of low-key uses, such as office, commercial, administrative or educational uses. The building could also possibly be used for residential and related uses, such as hotel accommodation. Any uses of the building should have limited impact on significant configuration or fabric.
- The original use of Amaroo (Building 44) and its important role in the provision of mental health services on the Bloomfield Hospital site should be interpreted, particularly its role providing accommodation and treatment for epileptic male patients, part of the complex system of assessment and management of patients and related administration and services of the hospital. Furthermore, the building provides an opportunity to interpret the changing understanding and treatment of epilepsy over the 20th century.

PROPOSED WORKS

- Proposed redevelopment of Amaroo (Building 44) for use as a Rehabilitation Mental Health facility.

Demolition

- Replace existing window with new entry door.
- Demolish toilets in front wing.
- Demolish existing walls in centre of junction of front and west wings.
- Remove bath in rear of ground floor west wing.
- Demolish bathroom in front east wing
- Demolish existing ramp and entry to west side of east wing.
- Demolish walls from rooms in annex to east wing.

- Demolish door and steps to west elevation of east wing.
- Replace window in north elevation of central wing with ramp and sliding door.
- Demolish walls at junction of central and east wings
- Demolish door and steps in west elevation of south east wing
- Demolish external ramp and door and fit window
- Demolish rear bathroom in south east wing and fit door

COMMENT ON IMPACT AND RECOMMENDATIONS
The proposed development involves the conservation of Amaroo (Building 44) with some degree of adaptive reuse to provide suitable facilities for ongoing use for the provision of mental health care.

The proposed works are generally sympathetic to the existing building, and involve no external additions, no new external openings and no changes to the existing configuration.

During the design development process, the northern elements of the Amaroo building were re-assessed and advice for demolition of the two extensions adopted. This restores the original form and is consistent with the CMP and HIS.

- **A single recommendation from the Conservation Management Plan and the Heritage Impact Statement has not been adopted. This is the removal of the enclosing infill to the verandah.**
- **In further design development and construction, it is recommended that the following works be indicated to ensure that the significance is retained and enhanced:**
- **The layout illustrates that the functions have been satisfactorily accommodated. The verandah is a significant element on the building and therefore the enclosure to the rear verandah is to be removed**
- **Bulkheads and nib walls are to be retained for all walls of original significance, which are proposed for demolition.**
- **In further design development and construction, it is recommended that the original fabric and finishes be retained, including joinery such as fireplaces.**

David Scobie, Heritage Consultant, will be involved in further detailed design development of this building, as well as during documentation and construction.

A detailed recording of the existing configuration of the building, including measured drawings and photographic recording of areas affected will be carried out before any works commence.

The proposed works involve retention of much of the original plan form of the building, as well as much of its original fabric and finishes. Minor reconfiguration is occurring with some minor demolition and additional internal partitions to create private rooms with shared en-suites for patients

No external additions to the building and no new openings are proposed. Some internal subdividing walls are proposed, and these are reversible.

The existing landscaped setting of Amaroo (Building 44) is retained, including the soft landscaped southern courtyard, subject to a rehabilitation of the foreground as noted.

- **The proposed development currently does not reinstate or interpret the original airing yard for this ward building, though this should be considered in further design development. With the removal of the front extensions the area will need rehabilitation hence a sympathetic landscape treatment is recommended.**

The proposed use of Amaroo (Building 44) as a Rehabilitation Mental Health facility is very similar to its existing use as a psycho-geriatric ward and is appropriate.

MEDICAL RECORDS - (Building 43)

SIGNIFICANCE
As part of the complex of buildings on the Bloomfield Hospital site, the Medical Records (Building 43) building (originally known as Building A) has EXCEPTIONAL heritage significance.

The current Medical Records (Building 43) building was originally known as Building A. Individually, this building has a HIGH degree of heritage significance

CONSERVATION POLICIES

- There are three single storey face-brick buildings, originally used as artisan's workshops on Artisans Way, all of which have a related distinctive form and character. These buildings should all be conserved as they have a high degree of heritage significance for their distinctive character and their evidence of efforts of self-sufficiency for the site. All existing original fabric and finishes in these buildings should be restored, and intrusive additions and internal changes should be removed in the Medical Records (Building 43).
- Building, these conservation works should focus on the demolition of the southern extension, and investigate more sensitive infill for the former large door openings on both sides of the southern bay.
- Adaptive reuse of these buildings is appropriate as long as the original plan form and character is still evident. The character of the Medical Records (Building 43) building means that there are limited opportunities for sympathetic additions, though they could possibly occur in a similar location to the existing addition, or to the rear. Subdivision of large internal spaces should be avoided if possible and should be reversible if required.
- The existing setting of these three buildings should be retained, in particular their relationship to Artisan's Way, indicating that these were service buildings and not requiring immediate soft landscaping.
- There are no preferred uses for this group of buildings. Their existing uses are acceptable; however, these buildings could accommodate a range of low-key uses, such as office, commercial, administrative or educational uses. Any uses of the buildings should have limited impact on significant configuration or fabric.
- The original use of this building and its role as one of several buildings constructed for use for manual trades and light industry, and part of the complex system of treatment and management of patients at Bloomfield, should be interpreted. Any images of specific trades should be incorporated if available.

PROPOSED WORKS

- No works proposed
- Proposed development of a new building for use a Forensic Mental Health facility accommodating Forensic & Secure Rehabilitation units with large fenced yards to the west of the former workshops (Buildings 42, 43 & 55).
- No change of use proposed.
- No interpretation proposed at this time.

COMMENT ON IMPACT AND RECOMMENDATIONS
The immediate setting of the workshops (Buildings 42, 43 & 55) is retained, particularly their relationship to Artisans Way.

It is recommended that interpretation of the whole of the Bloomfield site, as well as each relevant component be included as part of the development.

LIVING SKILLS - (Building 42)

SIGNIFICANCE
As part of the complex of buildings on the Bloomfield Hospital site, the Living Skills (Building 42) building (originally known as Building B) has EXCEPTIONAL heritage significance.

The current Living Skills building was originally known as Building B. Individually, this building has a HIGH degree of heritage significance.

CONSERVATION POLICIES

- There are three single storey face-brick buildings, originally used as artisan's workshops on Artisans Way, all of which have a related distinctive form and character. These buildings should all be conserved as they have a high degree of heritage significance for their distinctive character and their evidence of efforts of self-sufficiency for the site. All existing original fabric in these buildings should be restored, and intrusive additions and internal changes should be removed. In the Living Skills (Building 42) Building, these conservation works should focus on the demolition of the entrance ramp, as this is an intrusive element, and investigate the possible demolition of additions to the rear and side of the building. Part of the rear addition appears to be very similar in detail to the original drawing of this building and may date from close to the original period of construction. This part should be investigated in further detail and may warrant retention.
- Adaptive reuse of these buildings is appropriate as long as the original plan form and character is still evident. The character of the Living Skills (Building 42) building means that there are limited opportunities for sympathetic additions, though they could possibly occur to the rear. Subdivision of large internal spaces should be avoided if possible and should be reversible if required.
- The existing setting of these three buildings should be retained, in particular their relationship to Artisan's Way, indicating that these were service buildings and not requiring immediate soft landscaping.
- There are no preferred uses for this group of buildings. Their existing uses are acceptable. However, these buildings could accommodate a range of low-key uses, such as office, commercial, administrative or educational uses. Any uses of the buildings should have limited impact on significant configuration or fabric.
- The original use of this building and its role as one of several buildings constructed for use for manual trades and light industry, and part of the complex system of treatment and management of patients at Bloomfield, should be interpreted. Any images of specific trades should be incorporated if available.

PROPOSED WORKS

- No work proposed
- Proposed development of a new building for use a Forensic Mental Health facility accommodating Forensic & Secure Rehabilitation units with large fenced yards to the west of the former workshops (Buildings 42, 43 & 55).
- No change of use proposed.
- No interpretation proposed at this time.

COMMENT ON IMPACT AND RECOMMENDATIONS
The immediate setting of the workshops (Buildings 42, 43 & 55) is retained, particularly their relationship to Artisans Way.

- **The design of the secure perimeter fencing to the Forensic Mental Health building requires further consideration due to the impact on the context.**

It is recommended that interpretation of the whole of the Bloomfield site, as well as each relevant component be included as part of the development.

GROUNDS STAFF TEA ROOM - (Building 55)

SIGNIFICANCE
As part of the complex of buildings on the Bloomfield Hospital site, the Grounds Staff Tea Room (Building 55) (originally known as Building C) has EXCEPTIONAL heritage significance.

The Grounds Staff Tea Room (Building 55) was originally known as Building C. Individually, this building has an EXCEPTIONAL degree of heritage significance.

CONSERVATION POLICIES

- There are three single storey face-brick buildings, originally used as artisan's workshops on Artisans Way, all of which have a related distinctive form and character. These buildings should all be conserved as they have a high degree of heritage significance for their distinctive character and their evidence of efforts of self-sufficiency for the site. All existing original fabric and finishes in these buildings should be restored, and intrusive additions and internal changes should be removed. In the Grounds Staff Tea Room (Building 55), these conservation works should focus on the preservation of all original fabric as this building is very intact. The addition of a small brick safe to one corner of the building could be retained as long as it is interpreted.
- Adaptive reuse of these buildings is appropriate as long as the original plan form and character is still evident. The integrity and character of the Grounds Staff Team Room means that there are limited opportunities for sympathetic additions.
- The existing setting of these three buildings should be retained, in particular their relationship to Artisan's Way, indicating that these were service buildings and not requiring immediate soft landscaping.
- There are no preferred uses for this group of buildings. Their existing uses are acceptable; however, these buildings could accommodate a range of low-key uses, such as office, commercial, administrative or educational uses. Any uses of the buildings should have limited impact on significant configuration or fabric.
- The original use of this building and its role as one of several buildings constructed for use for manual trades and light industry, and part of the complex system of treatment and management of patients at Bloomfield, should be interpreted. Any images of specific trades should be incorporated if available.

PROPOSED WORKS

- No works proposed
- Proposed development of a new building for use a Forensic Mental Health facility accommodating Forensic & Secure Rehabilitation units with large fenced yards to the west of the former workshops (Buildings 42, 43 & 55).
- No change of use proposed.
- No interpretation proposed at this time.

COMMENT ON IMPACT AND RECOMMENDATIONS
The immediate setting of the workshops (Buildings 42, 43 & 55) is retained, particularly their relationship to Artisans Way.

It is recommended that interpretation of the whole of the Bloomfield site, as well as each relevant component be included as part of the development.

NURSERY, GREENHOUSE, POTTING SHED & AVIARY

SIGNIFICANCE
As part of the complex of buildings on the Bloomfield Hospital site, this series of buildings and structures (comprising a sunken greenhouse, potting shed and aviary) have HIGH heritage significance.

As a group, these structures have MODERATE heritage significance.

CONSERVATION POLICIES

- West of the former workshops on Artisans Way are a series of buildings and structures including a sunken greenhouse, potting shed and aviary. This group of structures assists in explaining the process of evolution of the landscape from bushland to landscaped estate. The structures relating to the nursery should be conserved, especially the sunken greenhouse. The existing configuration of these structures should be recorded before any alterations occur. The aviary does not contribute greatly to the heritage significance of this group and could be demolished after recording.
- The original (and in some instances, current) use of these structures contributes to their heritage significance, as it provides evidence of self sufficiency on the site. As such, adaptive reuse is not recommended. However, given the ad-hoc nature of the development of these buildings, they could accommodate alterations and additions without having a major impact upon their heritage significance.
- The existing landscaped setting of these structures should be retained, as it relates to their current and past use.

PROPOSED WORKS

- This complex of buildings and adjoining landscape elements, including garden beds and orchard will be demolished for the construction of a Forensic Mental Health building accommodating Forensic & Secure Rehabilitation units with large fenced yard.

COMMENT ON IMPACT AND RECOMMENDATIONS
These buildings and landscape elements have HIGH significance as part of the complex of buildings on the Bloomfield Hospital site. An alternative to their demolition would be preferable. However, as the proposed development involves their demolition to accommodate a new Forensic Mental Health facility in close proximity to existing facilities, they are to be recorded including photographic and video recording of the structures and surrounding landscape.

The existing landscaped setting of these structures will be lost, as these structures are proposed to be demolished, and a new Forensic Mental Health facility constructed in this location.

- **The revised Proposal drawings successfully locate the Greenhouse within an appropriate sympathetic landscape setting, proximate to the Car Park area between the Canobolas Clinic – building 56 and the New Forensic Mental Health building. The Greenhouse will accommodate both site interpretation and a plant maintenance facility.**

CANOBOLAS CLINIC - (Building 56)

SIGNIFICANCE
As part of the complex of buildings on the Bloomfield Hospital site, Canobolas Clinic (Building 56) has NEUTRAL significance.

Individually, Canobolas Clinic (Building 56) has NEUTRAL significance.

CONSERVATION POLICIES

- Canobolas Clinic (Building 56) is an unremarkable early 1990s building and with regard to its limited heritage significance, conservation is not necessary. If required, this building could be demolished. Alterations and additions could be carried out, as long as they do not impact on the heritage significance of the adjoining landscape or site overall. Detailed consideration of the external colour schemes on these 1990s buildings should be carried out as part of any future works, to reduce any impact on the overall heritage significance of the site.
- The existing setting of Canobolas Clinic (Building 56) should be retained, as this landscaped setting contributes to the building's neutral heritage significance.
- There is no preferred use for Canobolas Clinic (Building 56) though a continuation of its existing use is appropriate as this relates to the overall use of the site. Nonetheless, other low-key uses could be considered such as office, commercial, educational or residential and related uses, such as hotel accommodation.
- The original use of this group of structures should be interpreted, particularly their role in explaining the processes and management of the hospital and its grounds.

PROPOSED WORKS

- (Building 56) is to be reconfigured for use as a Rehabilitation Mental Health facility. A Forensic Mental Health facility accommodating Forensic & Secure Rehabilitation units with large fenced outdoor areas will be constructed to the north of (Building 56).
- The proposed reconfiguration does not involve a major change of use.
- No interpretation proposed at this time.

COMMENT ON IMPACT AND RECOMMENDATIONS
Alterations and additions to this building are appropriate as they do not impact on the heritage significance of the adjoining landscape or site overall. While the building is not architecturally sympathetic with the heritage character of the site, it does provide continuity in the recent development of the site and thus has historic if not aesthetic significance. The proposed redevelopment of this building is acceptable in heritage terms.

Detailed consideration of the external colour scheme of Canobolas Clinic (Building 56) should be carried out as part of these works, to reduce any impact on the overall heritage significance of the site.

The proposed works include the construction of a Forensic Mental Health facility to the north of Canobolas Clinic (Building 56). These works will reduce the existing soft landscaping surrounding Canobolas Clinic (Building 56). However the proposed massed planting surrounding the adjoining development will reduce the impact of this loss of landscaped setting.

- **The impact of the Forensic Mental Health building in particular the perimeter fencing is substantial. Further design work is required to produce a fencing design which has as sympathetic impact on the setting as is possible.**

MOONYA COTTAGE # 8 - (Building 37)

SIGNIFICANCE
As part of the complex of buildings on the Bloomfield Hospital site, Moonya Cottage # 8 (Building 37) has LITTLE heritage significance.

Individually, Moonya Cottage # 8 (Building 37) has LITTLE heritage significance.

CONSERVATION POLICIES

- While conservation is preferred, Moonya Cottage #8 could be demolished or altered if required, though recording of any changes is essential. If the building is being retained but upgraded, it would be preferable for any addition to this building to occur on any façade other than the building's front façade.
- The setting of the building does not directly relate to its significance, though retention of soft landscaping to the sides and rear of the dwelling is encouraged.
- The preferred use for this building is its existing residential use.

PROPOSED WORKS

- No works proposed.
- Proposed development of a new building for use a Forensic Mental Health facility accommodating Forensic & Secure Rehabilitation units with large fenced yards to the north of Moonya Cottage # 8 (Building 37). Immediately to the west is a new access road from The Crescent towards the new hospital development.
- No change of use proposed.

COMMENT ON IMPACT AND RECOMMENDATIONS
The immediate landscaped setting of Moonya Cottage # 8 (Building 37) is retained, though diminished by the scale and proximity the new building adjacent.

The proposed landscape treatment of the access road immediately west of the cottage will reduce any impact of the road on the dwelling.

MOONYA COTTAGE # 9 - (Building 36)

SIGNIFICANCE
As part of the complex of buildings on the Bloomfield Hospital site, Moonya Cottage # 9 (Building 36) has EXCEPTIONAL heritage significance.

Individually, Moonya Cottage # 9 (Building 36) has MODERATE heritage significance.

CONSERVATION POLICIES

- As a relatively intact Interwar dwelling, identified as being of moderate / exceptional heritage significance, and constructed as a house for the Chief Medical Officer in 1931, Moonya Cottage #9 should be conserved. Future conservation works should focus on opening the infilled rear verandah. All original fabric including internal finishes should be retained.
- Minor alterations to the building are appropriate as long as the original plan form and character of the building is respected, to provide an understanding of the original building. A preferred location for an addition would be towards the rear or eastern elevation. A possible form of extension may be a separate pavilion structure linked to the original house.
- The existing landscaped setting contributes to the significance of the dwelling and should be retained, especially the front fence, palms, tulip tree and ivy arbour.
- The preferred use for this building is its existing residential use.

PROPOSED WORKS

- No works proposed.
- No alterations to the dwelling are proposed, however, a number of the outbuildings to the rear of the dwelling may be demolished though this remains unclear at this stage.
- Proposed development of a large on-grade car park immediately north of Moonya Cottage # 9 (Building 36). Immediately to the east is a new access road from The Crescent towards the new hospital development.
- No change of use proposed.

COMMENT ON IMPACT AND RECOMMENDATIONS
Should the development involve demolition of any of the outbuildings to the rear of Moonya Cottage # 9 (Building 36), these should be photographically recorded.

The immediate landscaped setting of Moonya Cottage # 9 (Building 36) is retained, including the front fence, palms and ivy arbour. The proposed car park to the north will have limited impact upon the landscaped setting as it will be screened by vegetation. The tulip tree at the rear of the dwelling should be protected during any construction of the car park and new access road.

- **The treatment of the access road immediately east of the cottage needs to be seriously considered to reduce impact on the dwelling. This road should be screened by vegetation from the cottage.**

7. STATUTORY IMPLICATIONS

7.1 NSW ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The development application for the hospital redevelopment will be assessed and processed under Part 3A of the *NSW Environmental Planning and Assessment Act 1979* (EPA Act). It is a Major Project under State Environmental Planning Policy (Major Projects) 2005 as it falls under *Schedule 1 Group 7 Health and public facilities Subclause 18 Hospitals* as development that has a capital investment value of more than $15 million. The proposal has a total present value of $126 million. The Minister for Planning is responsible for determining development under Part 3A.

7.2 CONSIDERATION OF HERITAGE ISSUES

Bloomfield Hospital is listed on the State Heritage Register. Clause 75U (1) of Part 3A of the EPA Act, sets aside the need for certain authorisations for development that has been declared a Major Project that would otherwise be required.
These include:

- approvals under Part 4, Section 60 and excavation permits under section 139 of the *NSW Heritage Act 1977*, and
- permits under section 87 or consent under section 90 of the *NSW National Parks and Wildlife Act 1974.* Heritage issues should be included in the environmental assessment process under Part 3A of the EPA Act.

A Conservation Management Plan (CMP) and Statement of Heritage Impact for the Government Architect's Proposal/Development Application have been prepared for the Bloomfield Hospital site.

This Heritage Impact Statement (HIS) for the current Proposal should be read in conjunction with the CMP. The CMP and HIS will form part of the documentation submitted to the Department of Planning and NSW Heritage Council and should prove adequate to identify the heritage requirements (excluding Aboriginal heritage issues) for the environmental assessment under the Part 3A process.

8. SUMMARY AND RECOMMENDATIONS

8.1 SUMMARY

The proposed redevelopment of the south-western quarter of Bloomfield Hospital will have both positive and negative heritage impacts. A particularly positive aspect is the retention of most of the buildings from the early phases of development and the layout of the site. Many areas of open space are also unaffected by the proposal and thus will be retained. Some of the early and significant ward buildings are proposed for sympathetic adaptive re-use and the new landscape design reinforces the existing significant landscape character.

With the transition between the approved scheme by the Government Architect and the current pinnacle + healthcare proposal, there have been minor changes in the brief. These have included three additional elements: Radiotherapy, Teaching and the Blood Bank. They have been generally accommodated by expanding the General Hospital Building into areas previously identified for expansion. As a result the heritage impact by comparison with the approved scheme is negligible.

There has also been consideration of the negative heritage impacts and the need to mitigate them in many aspects of the schematic design as noted in the previous Heritage Impact Statement. These go some way towards improving the heritage outcomes for the site.

The current proposal does not depart from the bulk and scale identified in the previous scheme and the Heritage Impact Statement. The additions are to the east and west to accommodate the Radiotherapy and Blood Bank and are an acceptable extension of the length of the building, largely forecast in the anticipated expansion.

The footprint and location of the Acute Mental health building have been improved with respect to the impact on the eastern landscape and the forecourts to the retained Administration and Clinical services buildings.

- **The impact of the Forensic Mental Health building in particular the perimeter fencing is substantial. Further design work is required to produce a fencing design which has as sympathetic impact on the setting as is possible. Relocation of a portion of the adjoining car parking has improved the ability of additional planting to screen this element.**

The elevations to the buildings have substantially improved with respect to their impact on the significance of the site, buildings and landscape. The number of formal elements has been reduced, the cladding types have an increased common horizontal theme and the colour scheme exhibits greater variety and subtlety.

The elevation to the south western corner of the Hospital building have been amended to provide greater consistency with the northern and eastern elevations, as these face the heritage buildings and their context.

The landscaping meets the requirements and recommendations within the previous Heritage Impact Statement. The additional detail provided for planting, furniture and pavements complements the heritage setting and provides suitable screening.

Proposals for the buildings to be adapted cover the demolition and new works to Administration, Clinical Services and Amaroo.

- **Minor changes are recommended to the proposals to ensure that significance is protected. Works proposed to the Amaroo building are not yet satisfactory as the removal of previous additions and the reinstatement of the rear open verandah recommended in previous studies are again recommended.**

8.2 RECOMMENDATIONS

It is recommended that:

Generally

- awareness of the potential heritage impacts of incremental future changes in use and the increased volume of activity on whole Bloomfield Hospital site is important. Careful monitoring by both GWAHS, NSW Heritage Office and Orange City Council will assist to maximise potential positive heritage impacts and avoid or minimise negative heritage impacts.
- **an asset maintenance plan is to be developed for the whole site although it is appreciated that two management authorities are involved it is expected that it will prove cost effective;**
- photographic and video recording of the site as a whole, with particular attention paid to the redevelopment precinct and the buildings to be altered prior to redevelopment is to be carried out in accordance with the NSW Heritage Council archival recording guidelines. The recording should attempt to capture the character, spirit and atmosphere of the place, the lives of the patients and staff. Archival records should be compiled with other historic records and lodged on site, with the NSW Heritage Office and in Orange Library. **The Proposal is included within the Appendix;**
- maintenance and repair works to significant elements are to be undertaken in accordance with the policies in the Conservation Management Plan;
- a site interpretation strategy, guided by an interpretation plan is to be prepared to convey the exceptional significance of the place to staff and visitors. This would include the site as a whole in generality, as well as individual elements within the subject site;
- a Masterplan resolving re-use and development issues across the Bloomfield complex, that takes the exceptional heritage values of the place into account, be prepared under GWAHS auspices as a separate project to inform the further adaptive re-use of the site.

TB Ward, Building 38

- the male TB Ward has been identified as a significant and rare heritage item in the CMP. Its demolition will have negative heritage impacts on both the item and the site as a whole. Detailed archival recording is to be completed, including photographs, video and measured drawings prior to demolition. This will require careful removal of the temporary boarding and removal of debris from within the building and should include surrounding landscape areas;
- significant original fabric including joinery is salvaged for reuse in other heritage buildings being adapted as part of this redevelopment or stored for future use;
- should they be located, original painted glass panels are to be retained and reused within the new hospital development in conjunction with interpretation about the TB Ward building.

Wards 19 (Building 40) and 20 (Building 41) and Amaroo (Building 44)

- detailing of external finishes on both the new and historic buildings and internal finishes and fixtures in the historic buildings will have an impact on the heritage values of the site and individual elements, as could minor alterations to significant buildings. David Scobie, as Heritage Consultant, will advise on the further detailed design, documentation and construction;

- the original significant fabric and finishes are retained including joinery, fireplaces and fittings;
- detailed recording of the existing configuration of the buildings, including measured drawings and photographic recording of areas to be altered is carried out before any work is undertaken;
- if internal reconfiguration is proposed in future design development, any new internal subdividing walls are reversible and that evidence of walls proposed to be demolished is retained using nib walls and similar devices;
- building work associated with significant historic buildings is undertaken by qualified and experienced contractors with an understanding of the principles of heritage conservation;
- the NSW Heritage Council's Fire, Access and Services Advisory Panel are asked for advice regarding proposed changes to services or fire safety upgrades within significant buildings, as appropriate;

Nursery, Greenhouse, Potting Shed and Aviary

- detailed recording of the existing buildings and surrounding landscape where primary alterations are to occur, including measured drawings and photographic recording is carried out before any work is undertaken;

Canobolas Clinic

- reconsideration of the existing external colour scheme as part these works, to reduce the impacts of this uncharacteristic building;

Moonya Cottage #9 (Building 36)

- if any outbuildings are proposed for demolition they should be included in the archival recording program;
- the tulip tree at the rear of the dwelling is protected during road and car park construction;
- the new access road is screened by vegetation.

ANNEXURE 1 - E P & A ACT 1979: Consent

SCHEDULE 2
CONDITIONS OF APPROVAL
MAJOR PROJECT NO. 06_0111

B2 European Heritage

(a) A detailed schedule of external colour and finishes for the proposed buildings shall be submitted to Orange City Council, prior to construction works commencing.

- **A current set of schedules is included within the Appendix. This will be further developed and combined with samples for submission to Council.**

(b) A detailed landscaping plan for the development site shall be submitted to Orange City Council, prior to construction works commencing. Landscaping shall be implemented prior to occupation of the project and permanently maintained.

- **Current landscape plans are within the Appendix and will be further refined for submission to Orange City Council.**

(c) A heritage management strategy shall be prepared for the balance of the Bloomfield hospital site and improvements, addressing at least (i) adaptive reuse options; (ii) sympathetic integration of the remaining buildings into the new hospital; and (iii) protection of the cultural landscape values of the site. The strategy shall be prepared within 12 months of full development of the project prior to further project/development application/s for alternative or additional uses on the site.

- **The strategy will be subject to completion of the current project and coordination with GWAHS over the balance of the site.**

(d) Details of proposed fencing of the secure mental health unit shall be submitted to Orange City Council, prior to construction works commencing.

- **Schematic drawings are included within the Appendix. The design will be further refined for submission to Orange City Council.**

(e) The heritage garden curtilages to the north of building Nos. 40 and 41 shall be retained. The acute mental health building shall not encroach within the formal ward gardens.

- **The current drawings indicate that the heritage garden curtilages have been retained and enhanced through relocating the Acute Mental health building closer to the new Hospital allowing additional planting.**

(f) The proponent shall investigate options for the relocation and appropriate reuse of the sunken greenhouse. An investigation report shall be provided to Orange City Council prior to works commencing which affect the building.

- **The Greenhouse is to be relocated to a suitable site proximate to the accessible public car park between the Canobolas Clinic and the Forensic mental Health buildings. A report will be provided to Orange City Council prior to works commencing which affect the building.**

(g) Interpretative signage shall be erected in the vicinity of the Ward 20 and the horticultural buildings.

- **Interpretive signage is proposed to be erected in the paved court at the south west corner of the Hospital building proximate to the public entrance forecourt.**

(h) Infill buildings and alterations to existing buildings shall comply with *Design in Context: Guidelines for Infill Development in the Historic Environment* (Heritage Office 2005).

- **The Heritage consultant has advised the design team on matters of heritage significance and utilised the principles and relevant case studies with this reference document to guide the new works and alterations to the existing buildings as well as the landscape.**

(i) Further project application/s and/or development application/s shall be made prior to the erection of business identification or building identification signage for the project.

- **An integrated signage and street furniture strategy is to be developed for these elements within the site. The proposal will be submitted to Orange City Council.**

C5 European Heritage

(a) All heritage aspects of the works will be supervised by an appropriately qualified heritage consultant to ensure that the impact on the significant fabric is minimised and appropriate mitigation measures are taken.

- **David Scobie for David Scobie Architects Pty Ltd will supervise heritage aspects of the Project.**

(b) Detailed archival recording (including measured drawings, photographic and video recording) of buildings and structures to be demolished, and surrounding landscape, will be carried out *prior to demolition*. These archival records will be compiled with historic records, including copies of original plans, subsequent plans, historic photographs etc. A set of these documents will be stored on site, as well as off-site locations as required.

- **David Scobie Architects will provide the archival records**

(c) Prior to occupation, an interpretation strategy and plan will be prepared in accordance with the Heritage Office's guidelines. This will include a strategy for moveable heritage items and be supported by an oral history programme, to convey the heritage significance of the site to users of the site.

- **David Scobie architects will prepare an Interpretation Plan, consistent with NSWHO Guidelines**
- **Robert Willis will produce an oral history programme in conjunction with David Scobie Architects**

(d) All works which affect the existing built fabric of heritage buildings and structures within the site will be carried out in accordance with the Burra Charter.

- **David Scobie Architects will advise the Project team accordingly**

(e) Significant original fabric from buildings and structures to be demolished, including joinery, will be salvaged for reuse in works to other heritage buildings on the site or retained for future reuse.

- **David Scobie will identify the items for salvage and consult with Designinc on locations for their re-use and interpretation;**
- **Currently there appears to be no joinery for salvage and re-use from the TB Ward No. 20**

(f) The original painted glass panels from Ward 20 will be retained and reused within the new hospital development in conjunction with detailed interpretation about this building.

- **The glass panels are not within the building and their location is currently unknown. Should they be located, David Scobie will identify the items and consult with Designinc on location for their re-use and interpretation.**

(g) Maintenance and repair work to buildings and structures of heritage significance

will be undertaken in accordance with the policies in the Conservation Management Plan prepared by the Government Architects Office Heritage Section (July 2006).

- **David Scobie will identify the building elements referred to in the CMP and consult with Designinc Architects and the Project Team on appropriate restoration works**

(h) A Heritage Architect will be engaged to provide advice in relation to further detailed design and construction involved in the project.

- **David Scobie will provide Heritage advice**

(i) The original fabric of existing buildings to be refurbished (including joinery, fireplaces and fittings) and will be retained where possible.

- **David Scobie will identify the items including remaining joinery, fireplaces and fittings and consult with Designinc Architects and the Project Team for their retention and restoration**

(j) Detailed recording (including measured drawings and photographic recording) of the existing configuration of buildings to be refurbished as part of the project will be carried out *prior to the commencement of works*.

- **David Scobie Architects will undertake archival recording**

(k) Where possible, new internal subdividing walls to be introduced to heritage buildings will be reversible and evidence of walls removed as part of the project will be retained through the use of nib walls and similar devices.

- **David Scobie has identified the areas where new subdividing walls are to be introduced and consulted with Designinc Architects and the Project Team to ensure that evidence of walls removed is retained through the use of nib walls, ceiling bulkheads and similar devices**

(l) Building work to heritage buildings will be undertaken by qualified and experienced contractors with an understanding of the principles of heritage conservation.

- **David Scobie will liaise with Hansen Yuncken to ensure that building work to the heritage buildings is undertaken by qualified and experienced sub-contractors with an understanding of the principles of heritage conservation**

(m) Advice will be sought from the NSW Heritage Council's Fire, Access and Services Advisory Panel regarding changes to services or fire safety upgrades within heritage buildings as appropriate.

- **David Scobie will liaise with the Project Consultants and the NSW Heritage Council's Fire, Access and Services Advisory Panel as appropriate. Currently the proposals for services and fire safety are sympathetic with the heritage significance of the buildings. Revisions to the access proposals have been made to ensure that the significance of the existing entrances is retained**

ANNEXURE 2 - PROPOSAL DRAWINGS – Original Heritage Assessment

Architecture

Landscape

ANNEXURE 3 – PROPOSAL DRAWINGS – Revised Heritage Assessment

ANNEXURE 4 – ORAL HISTORY & VIDEO RECORDING PROPOSAL

Appendix D

Schedule B7 – Environmental Sustainability

Pre-Selection Proposal 3 October 2007

A revised Schedule B7 was provided in our Pre-Selection Proposal, with changes to our original Proposal shown in mark-up.

Variations - Post Pre-Selection Proposal Submission

There have been further variations to Schedule B7 and Attachment B7-01 since the Pre-Selection Proposal Submission, in particular to B7.1.1,

A new Schedule B7 is provided, together with the following attachments:

B7-01 Baseline Energy Usage for Construction Health Facilities – updated since RPSP

B7-02 Energy Measurement and Verification Plan – new attachment.

Schedule B7 – Environmental Sustainability

Table of Contents

B7.1 ENVIRONMENTAL SUSTAINABILITY 1

B7.1.1 INTRODUCTION 1

B7.1.2 SUSTAINABLE DESIGN PRACTICES 2

Architectural Sustainable Design Practices 2

Mechanical Services Sustainable Design Practices 4

Electrical Services Sustainable Design Practices 6

Hydraulic Services Sustainable Design Practices 7

Lift Services Sustainable Design Practices 8

Construction Period Sustainable Practices 8

Systems Management Sustainable Practices 9

Pinnacle Healthcare - Additional Sustainable Design practices 11

B7.2 ENERGY MANAGEMENT PLAN 14

B7.2.1 PLANNING 15

B7.2.2 AWARENESS 15

B7.2.3 MONITORING AND REPORTING 15

B7.2.4 OPERATIONS MAINTENANCE OF PLANT & EQUIPMENT 16

B7.2.5 ACHIEVEMENT 17

B7.3 PROPOSAL DESCRIPTIONS ENERGY EFFICIENCY 18

B7.4 PROJECTED QUARTERLY BASELINE ENERGY USAGE 19

B7.4.1 GENERAL 19

B7.4.2 HEATING VENTILATION AND AIR-CONDITIONING 19

B7.4.3 LIGHTING 19

B7.4.4 KITCHEN EQUIPMENT 20

B7.4.5 MEDICAL EQUIPMENT 20

B7.4.6 OFFICE EQUIPMENT AND GENERAL POWER 20

B7.4.7 DOMESTIC HOT WATER: 20

B7.4.8 HYDROTHERAPY POOL 20

B7.4.9 LIFTS 20

B7.4.10 LAUNDRY EQUIPMENT 21

B7.5 VERIFICATION OF THE DESIGNED ENERGY PERFORMANCE 22

B7.6 PROPOSAL DESCRIPTIONS - ENERGY CONSERVATION MEASURES 23

B7.6.1 HVAC UPGRADES 23
B7.6.2 LIGHTING 25

B7.7 PROJECTED AND GUARANTEED QUARTERLY ENERGY USAGE 26

B7.8 FINANCIAL ANALYSIS OF ECMS 27

B7.9 ECMS - MEASUREMENT AND VERIFICATION PLAN 28

B7.1 Environmental Sustainability

Pinnacle Heathcare understands the importance, value and neccessity for major energy users to proactively monitor and manage the energy consumption of their facilities. We have drawn on the vast array of expertise within the consortium and from leading independent specialists to design a new hospital for Orange that will utilise the latest technology, management processes and passive energy control systems to deliver a low energy consuming modern health facility.

To further benefit NSW Health and the Greater Western Area Health Service, Pinnacle Healthcare has identified retro-specified Energy Conservation Measures that will deliver energy efficiency operation from existing Health facilities in the Eastern Cluster. Combined with a proactive approach to facilities management and energy conscious delivery of support services, these energy efficient measures and processes will provide efficient and environmentally, as well as socially, responsible Health Facilities for the communities of western NSW.

B7.1.1 INTRODUCTION

Pinnacle Healthcare's design will provide outstanding embedded energy efficiency.

We have benchmarked our design with the objectives and model provided in NSW Health's Guideline TS11. Our design will provide a significant improvement on the outcomes estimated using TS11. This aligns very well with best practice outcomes in Australia.

Pinnacle Healthcare's design has been modelled using the Energy Plus modelling program to run the computations for energy consumption. The Energy Plus model complies with the modelling requirements of the Specification.

B7.1.2 SUSTAINABLE DESIGN PRACTICES

Pinnacle Healthcare has considered each of the ESD initiatives identified by NSW Health (detailed in Volume 2.1 of the RDP (Section 10.1)) as well as other strategies to ensure our design proposal maximises the benefits of sustainable design practices.

Details are provided below, addressing each of the following:

- Architectural
- Mechanical Services
- Electrical Services
- Hydraulic Services
- Lift Services
- Construction
- Systems Management
- Additional Pinnacle Healthcare Sustainable Design Initiatives

We look forward to discussing our sustainable design approach with NSW Health and other stakeholders.

ARCHITECTURAL SUSTAINABLE DESIGN PRACTICES

1.1 INSULATION	
Insulation with a thermal resistance of R2.0 for walls and R3.5 for roofs is recommended.	A minimum R3.0 is being specified for walls and R3.5 for roofs.
1.2 RADIANT BARRIERS	
Radiant barriers shall be provided to walls and ceiling.	A radiant barrier is being specified to underside of roofs and to all non-masonry external walls.
1.3 GLAZING	
High performance glazing suites.	A combination of double glazed and high performance low E glazing will be used throughout. Double glazing will be used where infection control or acoustics demand.
1.4 SHADING	
East and west facades	External Shading
Shading to prevent solar penetration during summer.	The orientation of all new buildings is more on a NE-SW grid axis rather than a N-S axis.
Sun shading that improves occupant comfort levels.	Facades with northerly aspects have passive shade structures at all windows giving protection from both summer midday sun and afternoon and morning low sun from the east and west.

ARCHITECTURAL SUSTAINABLE DESIGN PRACTICES

Occupant operable shading devices. Accommodation of the Guidelines for infection control.	The northerly aspects of the New Hospital also have precast concrete materials that improve their thermal mass. Operable shading will be limited to venetian blinds intended for darkening only not for thermal control. Where required for infection control these will be contained in double glazed units. There will not be any active shading systems. Light Penetration Significant care has been taken to introduce natural light into the buildings through courtyards in the New Hospital and scillion roofs over common areas in the Acute and Forensic Mental Health Facilities. Light coloured internal finishes will be utilised to minimise lighting power densities. Ceiling / wall / floor / reflectance will be at least 70% / 50% / 15% respectively unless special circumstances, such as screen based equipment, require lower levels.
1.5 EXTERNAL LOUVRES	
External louvres should be considered on the North, East and Western Facades.	Full and complete shading to north and east is constrained by other design brief imperatives such as Heritage and the Wards overlooking the golf course. Similarly the use of louvres has an affect. Our design presents alternatives to louvres that satisfy imperatives of Heritage and outlooks while minimising solar gain. The New Hospital building's NE-SW grid axis assists this problem allowing vertical shade panels adjacent windows
1.6 DAYLIGHTING	
Natural light, especially sunlight, has been proven to provide significant healing benefits to both physically and mentally ill patients. The incorporation of natural light into the facility through large windows or skylights is highly recommended. Effective natural lighting techniques should reduce not only the annual lighting energy consumption significantly but it also assist in reducing the air conditioning load.	A feature of Pinnacle Healthcare's design for the New Hospital is that all work spaces (excluding CN Offices, Ward Clerks stations and laboratory type) have natural light and an outside view. A daylight factor > 2.5% over 50% is a target and subject to further analysis, a factor of 30% of the OFA should be achievable. To assist this issue light coloured internal finishes will be utilised in order to minimise lighting power densities. Ceiling / wall / floor / reflectance will be at least 70% / 50% / 15% respectively unless special circumstances, such as screen based equipment, require lower levels.
1.7 MATERIAL SELECTION-VOLATILE ORGANIC COMPOUNDS	
Improvements in indoor air quality.	All building specifications will include restrictions that 95% of all painted surfaces and all carpets will be selected with low VOC

ARCHITECTURAL SUSTAINABLE DESIGN PRACTICES

	emissions. In addition we are able to specify and source low formaldehyde composite wood products for joinery. The AC system will have an economy cycle using up to 100% fresh air for both improved indoor air quality and energy saving. This will have the effect of regular purging of the indoor air.

MECHANICAL SERVICES SUSTAINABLE DESIGN PRACTICES

2.1 INTERNAL ZONING

Internal Zoning	We propose establishing zoning based on the following factors: ▪ Delivery of conditioned air only to occupied spaces ▪ Low occupancy areas ▪ Variable occupancy areas ▪ Out of hours and 24hrs use ▪ Minimising reheat ▪ Areas exposed to high solar radiation when compared to the remainder of the building.

2.2 MINIMISATION OF FAN STATIC PRESSURES

Air Handling Units and air distribution systems should be sized and selected with a total static pressure of not more than 1000 pascals.	Air distribution systems will be designed, sized and fans selected to ensure total fan static pressures are not more than 1000Pa.

2.3 VARIABLE SPEED PUMPING

The chilled water circuit should be designed to operate with variable speed pumping to allow the pumps' variable speed drives to decrease their volumetric flow rate when the hospital is not at full load. Care should be taken to ensure that the flow rate is not decreased to such a level as to cause laminar flow in the chiller evaporator vessels thus decreasing heat transfer from the refrigerant and increasing the risk of freezing.	Variable speed drives will be installed on all chilled water and heating water pumps. The speed (and volumetric flow rate) of the pumps within each piping system will be modulated by their respective variable speed drive, controlled by a pipe mounted differential pressure sensor. The BMCS will oversee the variable speed pumping strategy and generate software alarms on low (or high) differential pressure or Pump VSD failure.

2.4 REFRIGERATION EQUIPMENT

Provide high efficiency chillers with an ILPV/NPLV of no less than 9.5. All central refrigeration equipment should be selected to	High efficiency chillers will be selected with an IPLV/NPLV of no less than 9.5. All refrigerants used throughout the Project will have zero ozone

MECHANICAL SERVICES SUSTAINABLE DESIGN PRACTICES

operate on non-ozone depleting refrigerants.	depletion potential.
2.5 STAGING SEQUENCE OF CHILLERS	
A reduction in energy consumption should be achieved through optimising the staging sequence of chillers and boilers. This involves varying sizes of the plant to meet the most efficient part load operation. Chiller plant should be controlled through a site wide BMCS system to operate at peak efficiency.	Chillers will be staged for both energy conservation and load shedding. System redundancy allowance will nominally be nil. The AC system will have an economy cycle using up to 100% fresh air for both improved indoor air quality and energy saving. Load shedding will be integrated with power load shedding through the BMS and maintain theatre systems as highest priority.
2.6 CHILLER EVAPORATOR VESSEL PRESSURE DROP MINIMISATION	
Select chillers to minimise the pressure drop for the chilled water circuit through the evaporator vessel.	The maximum pressure drop through the chiller vessels will not exceed 45kPa.
2.7 HIGH EFFICIENCY MODULAR BOILERS	
Modular boilers, each with a dedicated circulating pump should increase the heating plant efficiency at part load. The boiler plant should yield a minimum of 80% efficiency at all part loads.	The domestic hot water system will be separate to the heating hot water system. Natural gas fired, high efficiency modular boilers will be installed, yielding a minimum of 80% efficiency at all part loads. The system will be boosted with an array of 72 solar hot water panels.
2.8 HIGH EFFICIENCY MOTORS	
High efficiency motors provide in the order of 3% improved efficiency over conventional motors. Based on the premise that the project's main HVAC energy consumption is through fans and pumps, high efficiency motors should be used throughout.	High efficiency motors (above 90% efficiency) will be provided for all mechanical plant (AHUs, FCUs, fans and pumps) in excess of 4kW electrical demand.
2.9 DUCT AND PIPING INSULATION	
High insulation levels provide a reduction in heat loss from reticulation of HVAC air and water systems.	All duct and piping will be insulated to levels of a minimum of AS/NZ 4508 standard.
2.10 AIR TO AIR HEAT RECOVERY	
Air-to-air heat exchange should be provided through the use of run-a-round coils or plate heat	Waste heat from the exhaust air will be captured via heat exchangers to pre-cool or pre-heat the outside air to the air handling units.

MECHANICAL SERVICES SUSTAINABLE DESIGN PRACTICES

exchangers.	Each recovery system will comprise of one (1) coil mounted in exhaust duct and a separate small coil mounted at each fresh air damper on the return air plenums. A small circulating pump will provide water flow to each coil. This will give the best flexibility with equipment in plant room as insulated pipes will be the interconnecting medium not rigid ductwork.

ELECTRICAL SERVICES SUSTAINABLE DESIGN PRACTICES

3.1 ELECTRONIC LIGHTING BALLASTS

Electronic ballasts should be provided for fluorescent lighting.	We propose that the selection of lamps and luminaires include: ▪ Tri-phosphor lamps will be provided generally ▪ T5 lamps will be installed to all common areas ▪ Luminaires with high reflectance, photometrically efficient profiles to maximise light output ▪ High frequency ballasts ▪ Luminaires with a light output ratio >70% ▪ High efficiency external lighting (ie high pressure sodium, metal halide or similar) with an efficacy greater than 50 lumens /watt. Subject to further discussion with NSW Health, lighting levels will be refined as the requirements of TS11 are more stringent (and more energy consuming) than AS1680.

3.2 LIGHTING CONTROL SYSTEMS

A fully integrated lighting control system which turns lights on and off in accordance with a time schedule should be provided.	Lighting control systems are proposed, including after-hours control. The use of lighting controls / dimmers / sensors will include: ▪ Lighting control to perimeter lights in the form of dimmer controls sensitive to fluctuations in outside daylight levels ▪ Zone light switching to minimise energy consumption. As a general rule no more than 500W per single switch for open areas. All enclosed offices will be separately switched. ▪ Light switches to be located intuitively to relate to the zone switched and minimise likelihood of switching on non required areas by mistake ▪ Occupancy sensing in areas of infrequent use, ie offices, conference rooms, storerooms, laboratories etc, using infrared motion detectors that shut off lighting when the rooms are not occupied ▪ External lighting with adjustable set-point photo-electric cell and overriding time switch control ▪ Computerised lighting control integrated with the BMS ▪ Locally initiated, timed after hours override provision for each separate operating area that may be used out of hours

ELECTRICAL SERVICES SUSTAINABLE DESIGN PRACTICES

3.3 INFRARED OCCUPANT MOTION DETECTORS	
Motion detectors should be employed in rooms to control lighting and air-conditioning.	Lighting control systems will include occupancy sensing in areas of infrequent use, ie offices, conference rooms, storerooms, laboratories etc, using infrared motion detectors that shut off lighting when the rooms are not occupied. AC systems are usually not unique to particular rooms. Differential heat loads between rooms affect the thermal efficiency of the AC systems. For these reasons infrared motion control of AC systems is not proposed.
3.4 ENERGY EFFICIENT APPLIANCES	
Energy efficient white goods should be installed in order to achieve a minimum of 4 Star performance rating.	High water and electrical efficiency in appliances is an integral part of FFE specifications.
3.5 ELECTRICAL SUB-METERING	
Sub-metering should be provided for substantive energy uses within the facility.	CT submetering will be provided at departmental level in each new building and at building level for those buildings being refurbished. The submeters will be monitored by the BMS. The meters will be capable of storing energy consumption and time logs should communications with the head end are broken.

HYDRAULIC SERVICES SUSTAINABLE DESIGN PRACTICES

4.1 LOW FLOW TAPWARE AND FITTINGS	
AAA rated fittings as a minimum.	Subject to infection control constraints, AAAA fittings will be used and sewer grades adjusted accordingly.
4.2 LOW FLOW APPLIANCES	
AAA rated appliance for water efficiency.	High water and electrical efficiency in appliances is an integral part of FFE specifications. Water efficient appliances should be in the 4 to 5 star range as per the Water Efficiency and Labelling Scheme (WELS), based on AS/NZS6400 Water Efficient Products.
4.3 DEAD LEGS	
Dead legs should be minimised.	All systems are closed loop.
4.4 COOLING TOWER WATER CONSUMPTION	
Cooling towers should be installed to operate at 6 cycles of	Our proposal provides for sealed system condenser heat rejection units.

HYDRAULIC SERVICES SUSTAINABLE DESIGN PRACTICES

concentration to assist in the reduction of make-up water.	There is no 'cooling tower' as envisaged by this consideration.
4.5 RAINWATER HARVESTING	
Rainwater harvesting should be considered for use in cooling tower make-up.	The mechanical services installation does not utilise open circuit cooling towers, so rainwater harvesting or make-up water is not available. A 45,000 kl water tank will be provided and filled for use for landscaping irrigation. The periodic testing of wet fire systems as required by AS1851 will discharge water in the first instance to the water tank.
4.6 WATER METERING	
Water meters should be provided.	Sub-meters for water meters will be provided for each new building and then for the site as a whole. The meters will be connected to the BMS. This will allow for monitoring of consumption for each new building and then by deduction to monitor the balance of the site.

LIFT SERVICES SUSTAINABLE DESIGN PRACTICES

5.1 HIGH EFFICIENCY LIFT CAR LIGHTING	
Lifts should use of high efficiency lift car lighting in lieu of decorative dichroic downlights.	All lifts will be used for patient movement and therefore must be fitted with colour corrected lighting. This limits the choice of lighting. Turning lights off in lifts using occupancy sensors is not permitted under the BCA and Lift Codes.
5.2 VARIABLE FREQUENCY DRIVES	
Variable frequency drives should be provided for all lifts.	Variable voltage variable frequency drives are proposed for all lifts.

CONSTRUCTION PERIOD SUSTAINABLE PRACTICES

6.1 WASTE MANAGEMENT PLAN	
A comprehensive waste management plan should be developed to minimise construction waste.	Pinnacle Healthcare will implement a comprehensive Environmental Management Plan, as part of the Project Management Plan, that includes a target of 80% of construction waste to be reused and/or recycled with a minimum of 60%. The methods used to achieve this are: ▪ Site streaming of waste ▪ Collaboration with an appropriate waste management subcontractor

CONSTRUCTION PERIOD SUSTAINABLE PRACTICES

- Delivery systems that minimise packaging
- Strict recycling measures for packaging
- Design for material modules
- Offsite prefabrication of components.

SYSTEMS MANAGEMENT SUSTAINABLE PRACTICES

7.1 COMMISSIONING

The completed project should undergo comprehensive pre-commissioning and commissioning during the project period in accordance with the CIBSE commissioning codes.

During the post project period after handover, a quality monitoring, tuning period should be undertaken for a minimum period of 18 months and for selected periods thereafter.

A Commissioning Agent should be used from design through to handover.

Commissioning Agent

Pinnacle Healthcare's Construction Contractor, Hansen Yuncken, is accustomed to providing a Commissioning Agent on all its sustainable developments including Lyell McEwin Hospital, Queen Elizabeth Hospital, Council House 2 (6 Star Greenstar) and SA Water (6 Star Greenstar).

Our Commissioning Agent is involved from the design phase, through construction and commissioning and then beyond handover through the tuning period.

The Commissioning Agent is integral to ensuring both the planning and implementation of commissioning are of high quality, that there is a continuity of knowledge and that knowledge is transferred appropriately.

The Agent will ensure that commissioning meets both ASHRAE and CIBSE guidelines.

Building Tuning

The purpose of building tuning is to:

- Verify that systems are performing at their optimum efficiency during all climatic variations for the occupied building
- Provide an opportunity for the building systems to be tuned to optimise time schedules to best match occupant needs and system performance, and
- Align the systems operation to the attributes of the built space they serves.

Our building tuning regime includes formal quarterly reviews of the following systems:

- Chilled water system
- Air handling systems including economy cycle fans, variable speed drives, VAV systems
- Heating hot waters
- Solar boosted hot water
- Lighting control
- Exhaust systems
- Building controls systems

SYSTEMS MANAGEMENT SUSTAINABLE PRACTICES

Our Commissioning Agent provides an additional service to that required of scheduled routine maintenance activities.

The Commissioning Agent ensures:

- Tuning of the minimum and maximum air quantities per VAV box over an 18 month period so that after the period every box has been rechecked
- Tuning of ensuite exhaust rates over an 18 month period so that after the period every exhaust has been rechecked
- Tuning the chilled water flow rates
- Tuning the heating hot water flow rates
- Tuning of the potable water systems
- Six (6) monthly checking of the operation of alarms message viewers in the BMS
- Six (6) monthly reviewing of occupancy levels, and holiday and special days schedules and respective system adjustments.
- Six (6) monthly reviews of electrical consumption meter logs for correct operation
- Six (6) monthly reviews of water consumption meter logs for correct operation
- Notification of any identified faults

7.2 BUILDING USERS' GUIDE

A comprehensive building users' guide should be provided to enable facility users to understand the environmental performance requirements of the facility.

A comprehensive building users' guide will be provided for three (3) user levels:

- Visitors - detailing the environmental matters relevant to visitors such as waste management, public transport, and energy and water conservation
- Hospital Staff - detailing the environmental matters relevant to staff such as waste management, operating conditions and energy and water conservation
- Engineering Services Staff - based on maintenance and operation manuals and the Health AMMS data base this will be focused on system operating conditions that provide optimum energy, water and waste outcomes.

The building user's guides will include:

- Energy and Environmental Strategies
- Monitoring and Targets
- Building Services
- Transport Facilities
- Materials and waste policy
- Expansion and re-fit issues
- References.

As well as information on operational issues, the guides will assist users to understand the environmental performance requirements

SYSTEMS MANAGEMENT SUSTAINABLE PRACTICES

and features of each facility.

7.3 BUILDING MANAGEMENT AND CONTROL SYSTEM	
The project should be provided with a comprehensive Building Management and Control System.	The Building Management System will control and monitor all aspects of the building services and plant and monitor energy consumption. The BMS will be capable of programmed and manual control of system set points for automated control. This will allow control of shutdown or shedding of systems not in use or re-setting of set points to minimise energy use out of hours

In addition to the above initiatives, Pinnacle Healthcare proposes the following, subject to consultation with NSW Health:

PINNACLE HEALTHCARE - ADDITIONAL SUSTAINABLE DESIGN PRACTICES

8.1 INTEGRATED BUILDING CONTROLS AND NETWORK CABLE SYSTEM	
Integrated Building Controls and Network Cabling	The project specification requires a minimum standard Cat 6 cabling for voice and data communication systems. By extending this system and using local area ceiling mounted consolidation points, we can expand the voice and data system to also carry building systems communications. This approach has a number of advantages, the most significant being that the building's communications systems infrastructure becomes incrementally more flexible for incorporation of refurbishments and the needs of future clinical equipment technologies without recabling. All building and patient systems are required to have open communication architecture allowing these systems to communicate over a Cat 6 cable network. This architecture then allows an integrated approach to the management of the data in these systems, a rationalisation of cabling and communication hubs and controls and a focused approach to commissioning of the systems. This integrated systems approach to voice, data and controls infrastructure has been a key component of the success of the Lyell McEwin Hospital, for which Hansen Yuncken won the Property Council of Australia's Rider Hunt Award in 2006.
8.2 ENVIRONMENTAL MANAGEMENT PLANS	
Environmental Management Plans	The implementation of an Environmental Management Plan for the design and construction will ensure that activities associated with the Project do not encroach towards unsustainable behaviour and assist to keep consultants, contractors and other stakeholders in check. Pinnacle Healthcare's Construction Contractor, Hansen Yuncken, is certified against ISO14001:2004 "Environmental Management

	System" and will ensure that practices on site are in line with our sustainability philosophy.
8.3 EMISSIONS	
Light Pollution	Light pollution will be minimised or eliminated by ensuring that all external beams of light fall onto surfaces within the site boundary, and the building complies with AS4282: Control of the Obtrusive Effects of Outdoor Lighting Council. Personal safety will not be compromised as part of the external lighting design.
Refrigeration Leak Detection and Recovery System	Refrigerant leak detection will be installed through sensor feedback to the BMS for major refrigerant plant. Refrigerant pump-down systems will be installed to ensure refrigerants are contained when equipment is not in use to minimise the possibility of leakage.
Construction Indoor Air Quality Plan	At completion of each building there will be a two (2) week flush-out prior to occupation.
8.4 INDOOR AIR QUALITY	
Ventilation Rates	Benefit is gained by providing outside air rates above the minimum requirements stipulated by AS1668 under normal operating circumstances (ie not just outside air economy cycle). Additional fresh air rates ensure carbon dioxide levels within the building are reduced, with the associated benefits to staff. Our design targets 50% improvement over AS1668.
Humidity Control	In order to minimise the long term effects of humidity the mechanical systems will be designed to provide humidity conditioning through cooling coil staging on the air handling units. Active humidity control through the use of humidifiers and dessicant dehumidifiers or other systems is expensive and energy consuming and as such these active systems are not proposed.
Air Distribution	All ductwork shall have access provided on both sides of moisture or debris generating equipment (eg coils).
8.5 ENERGY	
Medical Equipment Efficiency	Subject to discussions with users, Pinnacle Healthcare aims to maximise the amount of equipment that has a power saving standby mode. This is to reduce power consumption and heat output during times of no usage.
Domestic Hot Water	The design of the domestic hot water systems will include the following: ▪ The domestic hot water system separate to the heating hot water system ▪ Central DHW Plant will be gas fired and fitted with electronic ignition ▪ Storage units will be appropriately insulated to reduce standing losses ▪ Circulating pumps will be controlled to operate only when required

	▪ The use of flow restrictors and pressure reducing valves in a water management system ▪ Dead legs on piping distribution systems will be minimised ▪ Boiling water units in cafeteria areas to be of low energy design and time controlled to limit hours of operation.
8.6 WATER	
Portable Water Reductions	Our design proposal allows for the following: ▪ IR flushing sensors on urinals ▪ Waterless urinals in public toilets ▪ Low flow cisterns and dual flush cisterns
8.7 WASTE MANAGEMENT - WATERCOURSE POLLUTION	
Watercourse Pollution	In order to reduce the possibility of stormwater runoff from buildings polluting watercourses stormwater will be filtered and treated for up to a 1 in 20 year storm to Australian and New Zealand Environment Conservation Council (ANZECC)'s Guidelines for Urban Stormwater Management without increasing peak stormwater flows. Stormwater from the site will be pre-treated before discharging to the golf course wetland and dam.
Trade Waste Pollution	Pre-treatment effluent equipment will be provided that minimises the discharge of total dissolved solids and other pollutants to the sewerage system.

B7.2 Energy Management Plan

Pinnacle Healthcare is conscious of the impact major facilities such as hospitals can have on the environment through extensive energy consumption. Our aim is to maximise the opportunitues offered through energy efficient design and the introduction of energy conservation measures thereby delivering consistantly energy efficient facilities.

This section provides a brief outline of the Energy Management Plan (EMP) identifying key aspects that will be implemented in the Orange and Associated Health Services PPP Project. The EMP has been developed as a working document rather than a merely descriptive report; it includes an overview of the specific energy management categories to be addressed along with energy management responses.

A strategy workshop was employed as the platform for developing the EMP. The workshop was conducted to meet the following objectives:

- Understand the relevance of energy in the project
- The influence the design, plant, equipment, processes and procedures will have on the project
- How we can influence energy use by appropriate equipment selection, operation and maintenance
- Identify key areas, actions, opportunities and tasks for energy efficiency to be included in the EMP.

Experience has shown that facilities designed with ESD principles rarely achieve actual (operating) energy performance as against original design targets, without the involvement of the facility owners, building managers and staff on an ongoing basis.

The actions identified in this EMP describes how Spotless as Pinnacle Healthcare's facility managers will facilitate the relationship between the relevant parties on an ongoing basis to ensure energy performance is maintained and improved as against the original design. The actions are presented in the form of specific energy management actions identified under categories distilled from the RDP documentation, namely:

- Planning
- Awareness
- Monitoring and Reporting
- Plant/Equipment and Operations and Maintenance
- Achievement.

The following sections describe energy management responses to each of the categories.

B7.2.1 PLANNING

Specifically, Facilities Manager Spotless will undertake the following actions:

- Obtain corporate sign-off for the EMP
- Adopt the use of reporting actual energy consumption against variables including patient/bed capacity, number of beds (assuming increases or decreases), hours and ambient temperature
- Energy consumption targets will be compared with actual energy consumption and operational procedures implemented to achieve targets
- Undertake a study to investigate opportunities for reducing utility demand in close consultation with all stakeholders involved, and if feasible, implement the same.
- Spotless has developed equipment purchasing guidelines to ensure they reflect best practice from an ESD and energy efficiency perspective.

B7.2.2 AWARENESS

Pinnacle Healthcare understands the need to raise the awareness of staff on its current position on energy use and its sphere of influence. Pinnacle Healthcare intends to undertake the following actions to raise awareness:

- Pinnacle Healthcare will communicate the EMP to all involved stakeholders using various communications media. This will include formalising energy management as an agenda in meetings, using newsletters, communication packs that can be distributed, emails and mail.
- Work inductions to be held with all staff in GWAHS will address energy related aspects of the facility to ensure all staff is aware of basic energy issues. Such inductions will also include tips on energy efficiency and general energy housekeeping within the workplace.

B7.2.3 MONITORING AND REPORTING

In order for an EMP to be effective regular monitoring and reporting are critical. Pinnacle Healthcare will undertake the following actions:

- Regular monthly reporting on progress of the EMP and formal quarterly reporting will be undertaken.
- An annual audit of the EMP will be undertaken with a view to building continuous improvement in the following year's EMP.
- A data management and reporting system will be implemented for tracking energy consumption and revenue cost implications throughout the project term (construction, pre-commissioning, commissioning and post commissioning).
- A monthly energy performance report will be prepared to include a summary of energy consumption on a monthly basis. This will include total consumption, direct costs of utilisation, key utilisation areas and type of fuel. Understanding current and past energy use is how Pinnacle Healthcare can identify opportunities to improve energy performance and gain financial benefits. Assessing performance is the periodic process

of evaluating energy use for the Orange Hospital and establishing a baseline for measuring future results of efficiency efforts. The key tasks to be undertaken include data collection and management, base-lining and benchmarking, and analysis and evaluation.

- An annual energy performance report will be prepared to include a summary of energy usage patterns within the Orange Hospital.
- All energy reports will be prepared in accordance with the reporting requirements of the DEUS.
- Pinnacle Healthcare will prepare annual energy budgets and track expenditure against budgets on a regular monthly basis.
- Formal procedures will be put in place for facilities management to respond promptly to major variances in energy efficiency from targets.

B7.2.4 OPERATIONS MAINTENANCE OF PLANT & EQUIPMENT

Operations and maintenance of plant and equipment is one of the core functions and it is critical that the Orange facilities are operated as efficiently as possible and those maintenance regimes exist to allow full-time operation. Pinnacle Healthcare will undertake the following actions:

- A simple building users guide will be developed and address all relevant information for energy using equipment within the Orange Hospital. The guide will contain very broad brush stroke energy conservation measures that will be easily understood and achieved by the largest population of the Hospital; eg turning off lights when leaving store rooms or cupboards, adjusting PC settings to hibernate after non-use for 15 minutes, turning off televisions at the GPO overnight etc. All items will pass-on a level of ownership to the user and explain the delivery of savings through simple every day activities.
- Operating and maintenance procedures incorporating energy management will be developed for all plant and equipment housed within the Orange Hospital. An annual maintenance works plan will be developed and monthly reporting of the same will take place.
- Pinnacle Healthcare will ensure that energy management as a performance measure is incorporated in contracts with all relevant third party service providers, for example lift maintenance and operating set-up adjustments.
- All design specifications and guidelines for new installations, retrofits and replacements will be developed with due ESD and energy efficiency considerations. Energy efficiency provisions will be included in CAPEX approvals processes.
- Operations and maintenance personnel will be provided specific training in the application of guidelines for equipment selection, repair and replacement and in the use of life cycle costing. Knowing the Orange Hospital baseline energy use and the relative performance of the entire energy portfolio is only part of the information needed. Periodic assessment of the performance of the equipment, processes and systems will help Pinnacle Healthcare identify opportunities for improvement.
- A program to stimulate innovative ideas on energy efficiency will be instigated. The regular monthly meeting will be used as a forum for investigating such ideas.
- Metering and sub-metering will be installed for substantive energy uses within the

Orange Hospital; all meters will feed back directly through the Building Management System where data will be collated. Substantive fluctuations or use beyond pre-determined levels will trigger a review of use.

B7.2.5 ACHIEVEMENT

Pinnacle Healthcare will conduct an external annual audit to review every aspect of the EMP, checking implementation and progress.

The Engineering Manager will take responsibility for Energy (and subsequently be referred to as the Energy Manager for the purposes Energy issues) and will conduct a formal review of the EMP half yearly.

A formal mechanism for recognising and rewarding exceptional achievement in energy efficiency will be implemented. Performance goals drive energy management activities and promote continuous improvement. Pinnacle Healthcare will set clear and measurable goals as this is critical for understanding the intended results and reaping financial gains. Well stated goals guide daily decision making and are the basis for tracking and measuring progress. Pinnacle Healthcare will communicate and post goals to motivate staff to support energy management efforts.

The key steps in providing and gaining recognition will include:

- Providing Internal Recognition – To individuals, teams and facilities within Spotless.
- Receiving External Recognition – From government agencies, the media, and other third party organisations that reward achievement.

B7.3 Proposal Descriptions Energy Efficiency

Pinnacle Healthcare recognises the common element for successful energy management is commitment and intends implementing energy management using a co-ordinated approach across its business. To this effect, Pinnacle Healthcare will undertake the following actions:

- An Energy Policy will be developed and communicated to management, employees, contractors, sub-contractors and other stakeholders. An Energy Policy provides the foundation for successful energy management. It formalises senior management support and articulates commitment from Spotless to energy efficiency for employees, shareholders, the community and other stakeholders
- The Energy Manager will be responsible for coordinating tasks within the EMP and will provide support to Spotless personnel in implementing actions. The Energy Manager will help Pinnacle Healthcare achieve its goals by establishing energy performance as a core value.
- Progress with the EMP will form part of the agenda for the monthly meetings to be held by Pinnacle Healthcare.
- Pinnacle Healthcare will employ specialist experts to supplement the EMP. Specifically, an independent experienced commissioning expert will be appointed to provide commissioning advice relating to the HVAC and building control systems; and a Green Star Accredited Professional will be appointed at the outset of the Orange project. These specialists will provide ESD and energy efficiency advice throughout the design and delivery period, and commencing prior to the schematic design.
- Pinnacle Healthcare commits to preparing and maintaining comprehensive pre-commissioning, commissioning and quality information and documentation on aspects such as:
    - Design Intent – Information on energy efficient features and strategies in relation to the Orange building; energy targets and benchmarks for the Orange building; metering and sub-metering strategy and how to read, record and present meter readings; basic functions and operations of HVAC, electrical systems, lighting and all other plant and equipment.
    - Installed Details – A complete set of as-built drawings for all systems and Operations and Maintenance manuals will be developed.
    - Commissioning Reports – Commissioning reports will be maintained for all systems.
    - User Manuals – A complete set of user manuals will be developed and maintained.

B7.4 Projected Quarterly Baseline Energy Usage

Pinnacle Healthcare has established a team comprising industry experts from all fields of architecture, building services, engineering and management to join with the core members of Pinnacle Healthcare, Hansen Yuncken and Spotless ensure the design of the new Orange Hospital will operate with optimum energy efficiency. This collective approach has drawn on the expertise available form all facets of the building, property and health industries to create a building rich in inherent passive thermal management and operational energy frugality.

Spotless has reviewed the completed structural and engineering designs for the new Orange Base Hospital, Forensic Mental Health Facility and Acute Mental Health Facility and calculated both the TS11 rating and our forecast baseline energy consumption rating.

Attachment B7-01 shows the Baseline Energy Usage for Construction Health Facilities bid by Pinnacle Healthcare on a quarterly basis.

B7.4.1 General

- Floor areas used:
  1. General Hospital: 27,224m^2
  2. Acute Mental Hospital: 3,741m^2
  3. Forensic Mental Hospital: 2,656m^2
  4. Total: 33,621 m2
- Includes all energy end uses at the three facilities.

B7.4.2 Heating Ventilation and Air-conditioning

- There are three chillers each with a cooling capacity of 1400kWr; an (Integrated Part Load Value) IPLV of 9.5 has been used for electricity input. Seasonal load profiles have been used to estimate electricity consumption. A redundancy of 20% cooling capacity with all three chillers in operation has been used to assist with load profile estimates.
- Main heating boilers have a thermal output of 8,000MJ/Hr. It has been assumed that one of the two boilers has sufficient capacity to cater for peak heating demands and boilers would operate on lead/lag control. A seasonal efficiency of 90% has been used to convert thermal output to gas input.
- All fan and pump kW ratings have been estimated based on the provided air and water flow rates.
- Packaged units for ACMH and FMH have been assumed to have a COP of 2.5, heating and cooling capacities have been supplied to convert this to electrical input. It has been assumed that these will operate 24/7 and heating and cooling requirements will be reduced by 25% during the weekends.

B7.4.3 Lighting

A hand drawn lighting layout has been provided for the lower ground floor of the general

hospital. Using this, a lighting density (W/m2) has been calculated and extrapolated across other floors and the ACMH and FMH. Operating hours for lighting has been zoned into 24/7, Office hours (8am – 6pm, 7 days), Ward hours (7am – 10pm, 7 days), plant rooms (average 2 hours/day) and car park (reduce to 50% from 7pm – 7am). It has been estimated that 15kW of lighting will have day lighting controls (perimeter lighting) and selected rooms will have PIR sensors.

B7.4.4 Kitchen Equipment

Kitchen equipment has been excluded from the modelling.

B7.4.5 Medical Equipment

An equipment schedule for major energy using medical equipment has been supplied. Electrical ratings for the sterilisers have been supplied, the remainder has been estimated. Estimated daily load profiles for all equipment has been applied based on past knowledge of medical equipment usage at other hospitals.

B7.4.6 Office Equipment and General Power

An equipment schedule has been supplied to gain quantities of all office equipment and general power. Electrical input for each item has been estimated and applied to estimated daily load profiles. It has been assumed that all PC's will have TFT screens.

B7.4.7 Domestic Hot Water:

Thermodynamic calculations using the estimated daily domestic hot water usage provided has been used to calculate annual consumption for DHW. Seasonal boiler efficiency of 90% for the general hospital and 80% for ACMH and FMH has been used to convert thermal consumption to gas usage. It has been assumed that the solar hot water system for the general hospital will provide 60% of the total DHW heating; this has been incorporated into seasonal gas profiles also.

B7.4.8 Hydrotherapy Pool

The thermal output of the hydrotherapy pool boiler has been provided (540MJ/Hr), this has been applied to estimated daily load profiles. It has been assumed that the pool will have a cover which is put on after-hours and during weekends.

B7.4.9 Lifts

There are 4 lifts in the general hospital; an estimated motor size of 18.5kW has been used for electricity consumption. Estimated load profiles are based on two being used for general public and patients and two being used for goods and patients.

B7.4.10 LAUNDRY EQUIPMENT

It has been estimated that the industrial dryer will have a gas input of 150MJ/Hr; it has been assumed that this will operate 7 days per week from 6am – 6pm.

We have benchmarked our design with the objectives and model provided in NSW Health's Guideline TS11. The TS 11 Guideline provides indicative consumption rates for HVAC and lighting systems but excludes forecasts for domestic hot water, hydrotherapy pool, gas for kitchens, medi-gas plant and lifts.

As noted in Section B7.1, the base energy modelling for the New Construction Facilities has determined the total energy consumption to be approximately 1.18 GJ/ m^2 pa, which compares favourably with the TS11 benchmark of 1.3 GJ/ m2 pa.

B7.5 Verification of the Designed Energy Performance

Measurement and Verification (M&V) is the key to an Environmental Performance Contract, allowing proof to be developed that savings are being achieved and that performance of systems is maintained to agreed levels.

Pinnacle Healthcare intends to appoint an independent certifier that uses the International Performance Measurement and Verification Protocol (now abbreviated as the MVP) as a guide to the development of a rational M&V Plan.

Baseline Energy Management (BEM) will require a prescribed process of routine recording of energy data; a process simplified by the installation of circuit specific energy meters and full pass-through of detailed data by the Building Management System designed into the Hospital.

This process will be managed as part of a proactive response program whereby the current use of the facilities will be measured and recorded routinely and the data used to analyse the current energy requirement of each building. Where energy use exceeds predictions and instigates trigger levels (eg baseline minus 5%) a review of the pertinent contributing data will be initialised; average ambient weather conditions, hospital occupancy levels, special requirements (additional and/or abnormal events requiring additional energy).

Where no unusual contributing factors are identified the operational and management procedures will be reviewed to identify anomalies, variations from standard procedures or mishaps; where such issues are identified a management process will be instigated to rectify the source of the anomaly (such as staff training, operational procedure review etc.)

Facilities Manager Spotless will record and review the data collected through ongoing M&V management to identify trends, spikes and events contributing to variations in predicted energy use.

B7.6 Proposal Descriptions - Energy Conservation Measures

Pinnacle Healthcare understands that the reduction in energy consumption need not be restricted purely to new design and build projects. Current technology and methodology facilitates the modelling of system reconfiguration thereby delivering greater efficiency, reduced CO^2 emissions and reduced operating costs. Accordingly, Pinnacle Healthcare has undertaken surveys of the various buildings within the Eastern Cluster and the building services and has identified a range of saving opportunities in energy. These are described in the following energy conservation measures (ECMs):

B7.6.1 HVAC Upgrades

ECS site survey of the building's services has identified a range of saving opportunities in energy. These are described in the following energy conservation measures (ECMs):

ENERGY CONSERVATION MEASURES	
ECM 1 INSTALLATION OF MOVEMENT DETECTORS TO CONTROL THE AC UNITS	The air conditioning units serving individual rooms and common rooms such as dining, lounge and conference rooms are operating longer than required during the day once the units are turned on. These units are manually turned on and off by the occupants in the respective room. All these rooms are occupied intermittently and air conditioning is provided when these areas are unoccupied for many hours each year. Pinnacle Healthcare recommends installing movement sensors, which utilise ultrasonic technology, in the rooms mentioned above to limit the operation of AC units to occupied hours. The new control systems will turn on and off these AC units according to the signals received from the movement sensors, once the indoor units are turned on manually. The controllers will turn off the operating AC units, if no movement has been detected in rooms (served by one AC unit and a controller) for 15 minutes. This ECM will minimise the operation of AC units serving the areas mentioned above during unoccupied hours saving a significant amount of energy from mechanical cooling, heating and fan energy. It will also reduce the maintenance cost due to reduced operation hours.
ECM 2 INSTALLATION OF THERMOSTATIC FLOW CONTROL VALVES	The existing radiant heaters provide constant amount of heating continuously regardless of the space temperature once the system is switched on. Pinnacle Healthcare recommends Installing Thermostatic Valves on HW radiators to modulate the flow according to the space temperature. The HW flow through radiators will occur only when heat is needed (indication of local temperature sensors).

ENERGY CONSERVATION MEASURES	
ECM 3 INSTALLATION OF DDC CONTROLLERS ON HEATING SYSTEMS	The existing Hot Water Space Heating system either has no controls or the inefficient control strategies. Some systems maintain the hot water temperature in the HW system regardless of the ambient conditions. The following cost effective measures are proposed to improve HW space heating of the building: 1. Install Ambient Temperature Cut Out function to the boilers this will allow the boilers to run only when the ambient temperature are low (ie. less than 20 deg C). 2. Install HW Temperature reset function to the boilers – The temperature of hot water will be adjusted to the ambient temperature (ie. 70 –80 deg c will be required only during the coldest periods of the year). The boiler is running more efficiently if generating HW at lower temperatures. 3. Time scheduling of the pump operation in the buildings which are occupied during office hours only. In case of electric heating systems in common areas, time scheduling to switch on and off the Electric heaters.
ECM 4 INSTALLATION OF VSDS ON SUPPLY AIR FANS	The ducted heating system in Oberon Multipurpose Service Centre has three supply air fans. The supply air ducts have been fitted with motorised dampers to control the air volume in to each area. However the fans are running at constant speed. Pinnacle Healthcare recommends installing VSDs on these three supply air fans to reduce the speed according the increasing duct pressure when dampers are closing.
ECM 5 INSTALLATION OF MOVEMENT DETECTORS TO CONTROL THE ELECTRIC SPACE HEATERS	The Oberon Cottage Building has number of electric space heaters fitted in rooms. These units are left on during unoccupied hours for many days in a year. Pinnacle Healthcare recommends installing movement sensors to switch on and off these heaters after manually switched on to limit the operation of heaters for occupied hours.
ECM 6 INSTALLATION OF HEAT PUMP BASED DOMESTIC HOT WATER UNITS	Pinnacle Healthcare recommends replacing electric domestic hot water units with heat pump based domestic hot water units. These heat pumps are operating approximately 300% efficiency throughout the year reducing the electrical energy consumption for DHW generation by 60%. The electric type DHW units are normally operating at 100% or slightly lower efficiencies.
ECM 7 DECOMMISSIONING OF HOT WATER HEATING SYSTEMS IN AIR CONDITIONED AREAS	Some areas in buildings with hot water heating systems have been fitted with air conditioning systems. In winter, the heating system and the AC system operate to maintain the space temperature while heating system constantly pumping heat in to the space. Pinnacle Healthcare recommends decommissioning of heating systems in air conditioned spaces through out the

ENERGY CONSERVATION MEASURES	
	facilities.
ECM 8 INSTALLATION OF 365 DAY TIMERS TO CONTROL THE AC UNITS	Most of the AC units installed in office areas in buildings are manually switched on and off. It is possible to leave the AC units on during many nights expecting better space conditions on following morning especially on winter. Pinnacle Healthcare recommends installing 365 day programmable timers to control the AC units according to time schedules.

B7.6.2 LIGHTING

Although no ECMs associated with lighting are offered under this proposal, throughout the buildings surveyed there are significant energy and operational cost savings to be made. We briefly outline below the strategies that would realize these savings and note that, while there is particular scope to implement them in imminent refurbishment projects such as the old part of Oberon Multi-purpose Centre and a number of buildings at Bloomfield, they should also be applied to all maintenance upgrade work to be carried out in the future.

REPLACEMENT OF LIGHT FITTINGS

Significant energy and cost savings would be realized by the selection of appropriate replacement light fittings. At Bloomfield, the existing standard 2x40W rapid start, surface mounted fluorescent light fittings with wrap-around prismatic diffusers should be replaced with new fittings that consume 20% less energy per fitting and use lamps that cost 40% less than the current lamp. The replacement fittings should also be designed for office lighting – thus facilitating lifting the existing office lighting levels, which are generally significantly below Australian Standard AS/NZS 1680 requirements.

Significant energy savings can also be made by replacing existing incandescent lamps with compact fluorescent technology. This has been done in some cases already, using retrofit type compact fluorescent lamps in the existing luminaires, and appears to be policy. However in many cases this has required the removal of the diffuser to accommodate the different shape of lamp and both the appearance of the fitting and the quality of the resultant light is not really acceptable for a commercial or public installation. A small range of readily available replacement luminaires designed to accept compact fluorescent lamps could be specified the appropriate fitting obtained by the maintenance electricians to replace the existing fittings as appropriate.

CONTROL OF LIGHTING

There are also potentially significant savings to be realized by the installation of either movement or time based controls in many of the buildings, in particular the office buildings but also areas such as common rooms and dining rooms in the residential and educational buildings. However, given the diversity of uses that the various buildings are put to, the benefits and the appropriateness of the various types of control devices and systems that Pinnacle Healthcare can offer should be gauged on a case-by case basis following discussions with the supervisors of each building.

B7.7 Projected and Guaranteed Quarterly Energy Usage

Pinnacle Healthcare is not proposing Energy Conservation Measures at his stage.

B7.8 Financial Analysis of ECMs

When ECMs are identified and accepted in principle by GWAS, Pinnacle Healthcare will undertake a Detailed Feasibility Study (DFS) to confirm the operation and financial performance of these measures.

When the DFS confirms their findings of each ECM, GWAHS may agree to fund, or require Pinnacle Healthcare to fund, these projects as Energy Performance Contracts.

B7.9 ECMs - Measurement and Verification Plan

Measurement and Verification (M&V) is the key to an Environmental Performance Contract, especially with regard retrofitted Energy Conservation Measures (ECM); it allows proof to be developed that savings are being achieved and that performance of systems is maintained to agreed levels. Pinnacle Healthcare will appoint an independent certifier that uses the International Performance Measurement and Verification Protocol (IPMVP) to assess the success of the ECM M&V Plan.

Energy Conservation Measures require a well thought through methodology, one that is not out of proportion in terms of cost but delivers a level of accuracy and confidence suited to the risk involved.

An example of the simplest form of M&V may be logging of equipment before and after an efficiency measure has been implemented. At its more complex form, M&V may require analysis of building performance versus ambient weather conditions so that energy usage as a result of weather patterns (or other variables) can be identified apart from energy savings as a result of the measure (using software programs such as Metrix for this purpose).

A summary of M&V options based on the International Performance Measurement and Verification Protocol is suggested in the following table.

ECM	M&V OPTION (AS PER IPMVP 2000)	DESCRIPTION
HVAC	OPTION C	Savings are determined by studying the overall energy use in a facility and identifying the effects of ECMs on the energy usage pattern. Metrix software is used to analyse energy usage both before and after the ECM upgrade.
DOMESTIC HOT WATER SYSTEMS	OPTION C	This option determines savings by studying the overall energy use in a facility and identifying the effects of the ECM on the energy usage pattern. Metrix software is again used to analyse energy usage both before and after the upgrade.
PUMPS	OPTIONS A & B	Option A (involves using standardised formulae to calculate savings) will be used to verify energy savings. Option B utilises localised data loggers to actually measure new reduced energy consumption.

The IPMVP determines energy savings by comparing energy or demand before and after the implementation of energy conservation measure (ECM). Energy data are first normalized to ensure that savings are not over- or understated. The revised IPMVP uses the following equation as the basis for determining all types of energy savings (IPMVP 2000):

Energy Savings = Baseline Energy Use - Post-Retrofit Energy Use I Adjustments

Base year energy use is defined as energy consumption or demand during a period of any length before implementation of an ECM. The significance of the "adjustments" in the above

equation is crucial. Uniform conditions must be clearly spelled out in the M&V plan, but a number of routine and non-routine adjustments can be made to the plan.

Routine adjustments are allowed for predictable changes in parameters that can be expected to happen throughout the post-retrofit period. These adjustments can be mathematically modelled to represent the relationship between the parameters and the energy use-demand. These changes are often seasonal or cyclical, such as weather or occupancy variations. The IPMVP defines four basic options for making routine adjustments, a-d, of which a – c are nominated above.

Option a, or partially measured retrofit isolation, determines energy use or demand by isolating the energy use of equipment affected by an ECM from the energy use of the rest of the facility. Measurement equipment isolates all the relevant energy flows in the pre-retrofit and post-retrofit periods. Partial measurement means that some but not all parameters may be stipulated, if the total impact of possible stipulation errors is not significant to the resulting savings.

Option b, or retrofit isolation, does not allow stipulations; full measurement is required. Short-term or continuous metering may be used. Continuous metering provides greater certainty in reported savings and more data about equipment operation. These data can be used to improve or optimize the operation of the equipment on a real-time basis, thereby improving the benefit of the retrofit itself.

Option c, or whole building method, is commonly used in cases where there is a high degree of interaction between installed ECMs or between ECMs and the rest of the building. Whole building metering is also used when the isolation and measurement of individual ECMs is difficult or too costly. Option c uses utility meters or whole building sub-meters to assess the energy performance of the whole building. The whole building approach measures the total effect if more than one ECM affects an energy meter.

A draft Energy Measurement and Verification Plan (in response to Support Services Specification Appendix G) is provided at Attachment B7-02). The Draft Plan has two appendices:

Appendix A Energy Modelling Report by Energetics

Appendix B BMCS Schedule (Draft)

ATTACHMENTS

Attachment B7-01 Baseline Energy Usage for Construction Health Facilities

Attachment B7-02 Energy Measurement and Verification Plan - Draft.

Appendix E

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Project: ORANGE AND ASSOCIATED HEALTH SERVICES PPP PROJECT

Subject: Orange Council MEETING

Date: 11 December 2007 at 11.00 am

Location: Orange Civic Centre, Byng Street Orange, NSW

Attendance:

Allan Renike	Manager Development Assessments	(AR)
Summer Commins	Assessment Officer	(SC)
John Hunt	Hansen Yuncken	(JH)
Tom Longhurst	Hansen Yuncken	(TL)
Paul Blair	Hansen Yuncken	(PB)
Anthony Kim	Silver Thomas Hanley Designinc	(AK)

Distribution:

To all present, plus:

David Beslich	Hansen Yuncken	(DB)
Wayne Harris	Hansen Yuncken	(WH)

No.	Item	Who	Due
1.0	**PRESENT & APOLOGIES**		
	David Beslich and Wayne Harris		
2.0	**CONCEPT REPORTS & ISSUES**		
2.1	**General**		
2.1.1	Introduction to the PPP process with Pinnacle as preferred provider To be confirmed by Department of Health	NOTE	
2.1.2	Department of Planning is Consent Authority under Part 3 A with delegation to Orange City Council Project Review at this stage determined that the Pinnacle scheme is substantially the same as the approved Reference scheme, Pinnacle scheme is to be submitted to Dept of Planning on Monday 171207 for re assessment.	NOTE	
2.1.3	Scheme departures include Radiology, Dental teaching and Blood Bank however these elements were foreshadowed in Reference scheme as expansion areas but Pinnacles has been instructed by the Department that these areas are to be included in brief.	NOTE	
2.1.4	Silver Thomas Hanley Designinc presented Pinnacle Scheme. Silver Thomas Hanley Designinc pointed out improvements over the Reference Scheme examples of Improvements include siting of Acute Mental Health General Hospital external elevations	NOTE	

No.	Item	Who	Due
2.1.5	Contemporary approach to all building elevations has removed imitative elements including pitched rooves and brick cladding	NOTE	
2.2	**Council Issues**		
2.2.1	Council can see no major issues in Pinnacle scheme in principle agree with Pinnacle design approach.	NOTE	
2.2.2	It was noted to Council that the Pinnacle Scheme has included a number of the Part 3A Conditions i.e pedestrian crossing, tree screening.	NOTE	
2.2.3	HY confirmed that the entry off Forest Road remains the same as per the reference scheme.	NOTE	
2.2.4	AR to organise a meeting with council members so HY can present Pinnacle Scheme, Thursday 211207 in the evening. To be confirmed	AR	
2.3	**Submission**		
2.3.1	AR to be HY Orange Council point of contact at this point in time.	NOTE	

MEETING CLOSE 12.00pm

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Project: ORANGE AND ASSOCIATED HEALTH SERVICES PPP PROJECT

Subject: Heritage MEETING

Date: 26 October 2007 at 11.00 am

Location: Heritage Council of NSW, 3 Marist Place Parramatta, NSW

Attendance:

Vincent Sicari	Conservation Team Heritage Office	(VS)
Murat Gul	Conservation Team Heritage Office	(MG)
John Hunt	Hansen Yuncken	(JH)
David Beslich	Hansen Yuncken	(DB)
Paul Blair	Hansen Yuncken	(PB)
Ghis Coulon	Silver Thomas Hanley Designinc	(GC)
Anthony Kim	Silver Thomas Hanley Designinc	(AK)
David Scobie	David Scobie Architects	(DS)
James Heron	Taylor Brammer Landscape Architects	

Distribution:

To all present, plus:

Matthew Taylor	Taylor Brammer Landscape Architects	(MT)

No.	Item	Who	Due
1.0	**PRESENT & APOLOGIES**		
	Matthew Taylor		
2.0	**CONCEPT REPORTS & ISSUES**		
2.1	**General**		
2.1.1	Introduction to the PPP process with Pinnacle as preferred provider To be confirmed by Department of Health Department		
2.1.2	Department of Planning is Consent Authority under Part 3 A with delegation to Orange City Council Project Review at this stage determined that the Pinnacle scheme is substantially the same as the approved Reference scheme, Pinnacle scheme is proving a satisfactory response with respect to the building heritage impact on the site.		
2.1.3	NSW Heritage Council provided comments and recommendations on the approved Reference scheme which were not adopted under the Consent conditions		
2.1.4	Scheme departures include Radiology, Dental teaching and Blood Bank however these elements were foreshadowed in Reference scheme as expansion areas but Pinnacles has been instructed by the Department that these areas are to be included in brief.		

No.	Item	Who	Due
2.1.5	Silver Thomas Hanley Designinc presented Pinnacle Scheme. Silver Thomas Hanley Designinc pointed out improvements over the Reference Scheme examples of Improvements include siting of Acute Mental Health General Hospital external elevations		
2.1.6	David Scobie pointed the Heritage impacts regarded as minor and acceptable using the Heritage Impact Statement from the reference scheme as the base for assessment of the heritage impact.		
2.1.7	Contemporary approach to all building elevations has removed imitative elements including pitched rooves and brick cladding		
2.2	**Heritage Issues**		
2.2.1	Heritage Council comments: Heliport location to be the same in plan and level as Reference scheme. Covered ways to be described in context of family of street furniture. Review car park next to Forensic Mental Health entry to increase curtilage Illustrate design/materials for secure compound fencing & landscape Improve articulation and detailing on SW corner of the General Hospital ie elevation facing 2 heritage buildings – to achieve quality/consistency with north elevation Use of and reference to Design in Context brochure guidelines for building in the vicinity of heritage items is recommended		
2.3	**Submission**		
2.3.1	Formal Submission to be made to Heritage Council in 1 week's time this is to include Architectural and Landscape Drawings in an A3 set and full size drawings along with the Heritage Impact Statement.		

MEETING CLOSE 1.00pm

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Project: ORANGE AND ASSOCIATED HEALTH SERVICES PPP PROJECT

Subject: Orange EX - Services Club MEETING

Date: 12 December 2007 at 11.00 am
Ex - Services Club

Location: 231-243 Anson Street Orange, NSW

Attendance:

Dominic Connaugton	General Manager	(DC)
John Hunt	Hansen Yuncken	(JH)
Paul Blair	Hansen Yuncken	(PB)

Distribution:

To all present, plus:

David Beslich	Hansen Yuncken	(DB)
Wayne Harris	Hansen Yuncken	(WH)

No.	Item	Who	Due
1.0	**PRESENT & APOLOGIES**		
	David Beslich and Wayne Harris		
2.0	**CONCEPT REPORTS & ISSUES**		
2.1	**General**		
2.1.1	Introduction to the PPP process with Pinnacle as preferred provider To be confirmed by Department of Health	NOTE	
2.1.2	Department of Planning is Consent Authority under Part 3 A with delegation to Orange City Council Project Review at this stage determined that the Pinnacle scheme is substantially the same as the approved Reference scheme, Pinnacle scheme is to be submitted to Dept of Planning on Monday 171207 for re assessment.	NOTE	
2.1.3	Discussed with DC two options for fence along the Northern boundary as per Part 3A consent	NOTE	
2.1.4	Option 1 - 12m high fence along the total northern boundary	NOTE	
2.1.5	Option 2- Blinker fence (height to be determined) adjacent to the tee and a 12 m high fence 250 m long along the rest of the northern boundary. Wentworth Golf Course have a similar Fence system.	NOTE	
2.1.6	HY to prepare a submission to Club for review and approval	HY	
2.1.7	Club involvement during the construction phase i.e. Catering etc	NOTE	
2.2	**Council Issues**		
2.2.1	Council and Club to work out parking arrangements and location of new playing fields during construction time.	NOTE	

No.	Item	Who	Due
2.3	**Submission**		
2.3.1	Preferred Fence option to be prepared and issued to Club and Coucil for approval	NOTE	

MEETING CLOSE 12.00pm