



BROKEN HILL ACUTE ADULT MENTAL HEALTH UNIT & EMERGENCY DEPARTMENT

DESIGN STATEMENT
23 OCTOBER 2023



Health
Infrastructure



Health
Far West
Local Health District



VERSION CONTROL SCHEDULE

Project: Broken Hill Acute Adult Mental Health Unit & Emergency Department

Document: Design Statement

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1.0

INTRODUCTION

1.0 INTRODUCTION

1.1 BACKGROUND

The Broken Hill Hospital Redevelopment consists of an upgrade to the Emergency Department as well as a new purpose built Mental Health Inpatient Unit. The A8-Mental Health Unit Western Region of NSW is a project under the State-wide Mental Health Infrastructure Program (SWIMHIP). The SWIMHIP is one of the key enablers for enhancing mental health care in NSW and supports a range of national and state-level strategic frameworks and priorities. The SWMHIP will deliver infrastructure to increase system capacity in addition to supporting the provision of a person-centred approach, recovery-oriented practice, and trauma informed care. Additional scope around an expanded Emergency Department was introduced to the project during the masterplanning phase of the Mental Health Unit.

The Broken Hill Mental Health Unit will consist of 8 beds on the Broken Hill Hospital campus. Admission to the unit may be voluntary or involuntary under the Mental Health Act 2007.

The reconfiguration and expansion of the existing Emergency Department will run concurrently with the Mental Health Unit development. The Emergency Department expansion project will address the shortcomings of the existing Emergency Department, providing additional area, improved functional adjacencies and the ability to stream varying patient presentations.

1.2 PROJECT SCOPE

The project will include:

- Early Works/Enabling works for relocation of roads & access ways, services (above and in-ground), and car parking;
- Staged services disconnection / reconnection.
- Main works for the new Mental Health Unit
- Staged redevelopment of the Emergency Department, including ambulance bay
- New Carparking to replace existing displaced car parking

The new unit will be designed to meet the current Australian Health facility Guidelines and provide a safe and therapeutic environment for acutely unwell consumers with known or suspected psychiatric conditions and behavioural disorders. It will include appropriate facilities for reception, administration, assessment, diagnosis, observation, treatment and recovery of the consumers.



Fig 1.1 - Proposed Mental Health Unit Render

1.0 INTRODUCTION

1.3 DESIGN PROCESS

Positive outcomes for both the ED and MHU were considered in the masterplan. The ED, given current appropriate connections and adjacencies to required services will be redeveloped in place.

As access to the site can be managed from various sides, it is possible to maintain ED operations through the development time-line.

- **Managing impact to existing infrastructure**
 - / Limiting impact on existing carparking number
 - / Reducing staging and decanting requirements
 - / Limiting displacement of existing services/infrastructure
 - / Minimising disruption to existing services during construction
- **02-Maximising options for future expansion**
 - / Allowing future horizontal expansion of the Mental Health Building and existing hospital building
- **03-Improved Functional Relationships with existing hospital**
 - / Managing impacts on privacy of other services
 - / Limiting/managing public crossover with clinical services
 - / Maintaining access for logistics
 - / Facilitating optimal internal planning for the units
 - / Improving proximity of MHU to ED
- **04-MHU specific objectives**
 - / Improved access to theatres from MHU for possible future ECT
 - / Privacy of patient bedrooms
 - / Discreet entry for patients/visitors
 - / Access to environment, solar aspect & courtyards
 - / Provision of a low-stimulus environment
 - / Ease of access, wayfinding & safety
 - / Limiting/managing public crossover with clinical services
 - / Maintaining access for logistics

The endorsed site option for the MHU allows the key objectives of the SWMHIP to be incorporated. While in close proximity to the relevant existing hospital functions, the facility will have the opportunity to have its own identity which aligns with the service profile.

- Creation of therapeutic environments is possible through careful planning and design of the building form, as the site is generous enough to allow for several options to be explored.

- Arts in health can be incorporated into the new development through consultation with staff, consumers and the local community.
- Green space and outlooks can be created through connection to existing and new landscape. This may be through dedicated secure courtyards and framed views to the surrounding landscape and vegetation.
- Consideration to ESD principles will allow a forward looking and future proofed facility that embodies sustainable active and passive design solutions.
- Innovative spatial designs will work to improve consumer experience and outcomes while providing the added benefit to create a safe and flexible space for all, consumers, staff and visitors.

The design process has been stakeholder led incorporating the following key principles

- Layout to suit staffing profile and management
- All Therapy (inpatient pods, activity / recreation) and Clinical support zones located in the main unit building, at the western corner of the proposed site
- All Entry / waiting / reception and Staff areas are part of the entry pavilion, at the eastern part of the site
- A link is expressed to make the connection between the two units via a secure corridor, offering landscape views and contemplation moments to support the patient recovery
- Low-stimulus environment provision for the High Acuity Unit
- Resilient main unit planning with ability to secure the Vulnerable Consumers and the High Acuity units independently
- Biophilic design with landscape and natural light omnipresence
- Patient privacy focus through entry sequence, lines of sight optimization, well thought courtyard design and internal landscape dialogue (link, openings)
- Maintenance access to the inpatient unit being minimised through the circulation and link to the main hospital
- Separate zones for Adults/ Vulnerable Persons and High Acuity care.

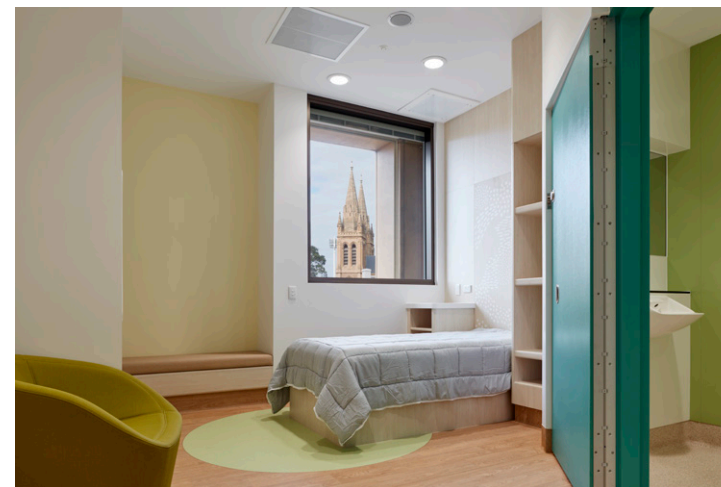


Fig 1.2 - Women's and Children's Hospital - Benchmark project / STH

1.0 INTRODUCTION

1.4 DESIGN PRINCIPLES

The design approach seeks to integrate the surrounding environment and character of Broken Hill with the built form materiality. This will be achieved through references to the vernacular, nature and land-form textures.

As a local asset and truly integrated into the community, that includes the outside spaces and insides spaces that promote wellness and healthy being for the community, patients, staff and carers.

The use of colour in the facility will add depth to the wayfinding and provide reference to the surrounding nature. This will be connected to the wayfinding approach connecting intuitive access points and links to spaces and services for public, staff and emergency vehicles.

The facility will be highly functional but will have the capacity for change, flexibility and adaptation as well as sustainable design principles incorporation.

The fundamental elements of the design vision are to:

- Deliver the clinical requirements of the service
- Deliver the principles of the Program (SWIMHIP)
- Enhance place-making, environment, sustainability, and resilience

The key opportunity of the new Mental Health Unit is to provide place-making principles for the campus and greater connection with the Country.

The public domain key benefits are:

- Enhance public domain to improve staff and consumer experience of the campus
- Improve service identity, access and wayfinding
- Establish mindful spaces with shade from Broken Hill's dry and hot environment

Workshops were held in Concept Design to develop the green space and outlook principles, to meet excellence in design and connecting with Country design principles.

A biophilic design is the first commitment to a consumer focused, recovery orientated approach to the overall therapeutic environment of the project. The design connects the existing landscape, the main hospital drop off, the internal spaces and adult courtyard.

The visibility of green spaces, of the sky, was seen as a key element in the building concept. The consumer is surrounded by natural light and landscape views, which is a biophilic response to SWMHIP principles of well-being and understanding of lived experience of consumers and carers.

The main entry provides a connection with the country with its rammed earthed design that wraps internally to the waiting space. The link contributes to the well-being of the consumer, supporting the patient journey with natural earth provision.

1.5 HEALTH INFRASTRUCTURE DESIGN ADVISOR'S REVIEW

The design phase has included regular review and feedback from Health Infrastructure Design Advisors, with feedback incorporated into the design process. During the design phases, the following meetings occurred:

2x ERG during Concept Design

2x ERG during Schematic Design

Feedback received has been incorporated into site aspect and orientation, building materiality and interface with the surrounding site components.

The design process has also involved Health Infrastructure planning experts to ensure best practice clinical planning is realised. This has continued from Schematic Design through to Design Development, informing planning layout and operational considerations.



Design for the Neighbourhood & Surrounding environment

Healthcare facilities contribute to public spaces. Well designed & carefully considered public spaces can strengthen the community & contribute to the quality of the built environment

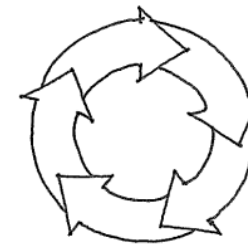


Design for Connection

Health Facilities are important nodes & should enhance urban, transport, community & health networks

Health Infrastructure

For more information visit hinfra.health.nsw.gov.au



Design for Longevity & Resilience

Healthcare facilities are places of constant change & must meet the needs of diverse communities



Design for Dignity

Healthcare facilities should welcome people of all ages, abilities, backgrounds, cultures & socio-economic groups



Design for Wellbeing

Well designed health facilities contribute to the wellbeing of all



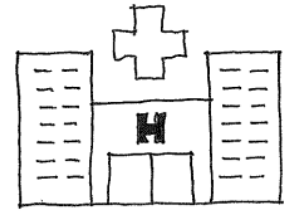
Safety & Security

The safety and security of patients, staff and visitors is an important design principle for every healthcare facility



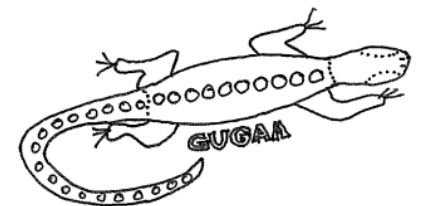
Design for Sustainability

Sustainable design brings public health benefits & green buildings and places improve individual health outcomes for all users



Design for Efficient & Flexible delivery of care

The design of health care facilities must support busy, highly skilled people undertaking difficult, demanding & stressful tasks



Design with Country

DwC means putting the Aboriginal experience, concept and expression of Country at the centre of design processes



Design for the Consumer

The Broken Hill Hospital Redevelopment will be co-designed with input from its key users / consumers and with their design requirements considered

2.0

THE SITE



2.0 THE SITE

2.1 SITE LOCATION

The Broken Hill Hospital site is set in a regional urban centre. Scale and form of the facility will work with the existing surrounding building fabric.

Broken Hill Hospital is located to the north of the town, surrounded by largely residential development. Associated administration and community health functions are housed in a separate facility, the Broken Hill Community Health Centre, close to the town centre.

The Hospital site is broadly divided in two parts, the upper plateau and lower portion of the site upon which the main hospital facility is located. The western portion of the site remains largely undeveloped due to a much steeper gradient across this section.

Broken Hill has a hot desert climate. While winters in Broken Hill are relatively mild, overnight it can be cold with moderate frost. Summers can be variable, mostly hot and dry with occasional summer storms.

The new MHU building fronts onto existing carparking and access roadway, necessitating consideration for patient privacy, views from the unit and separation of the consumers from the passing vehicle and pedestrian traffic.

Entry to the campus is via Thomas Street and Chloride Street. Emergency vehicle access is at the north end of the main hospital. On-site parking is sprawled through the site. There are dedicated accessible parking bays as well as bicycle racks.

The hospital can be accessed using various modes of transport. There is a Bus Stop and taxi rank located at the Main Entrance of the hospital. Servicing and waste disposal circulate the site in multiple locations and on separate occasions facilitate oxygen deliveries and car fleet transportation. The Emergency Department Planning should not affect existing On-Site parking.

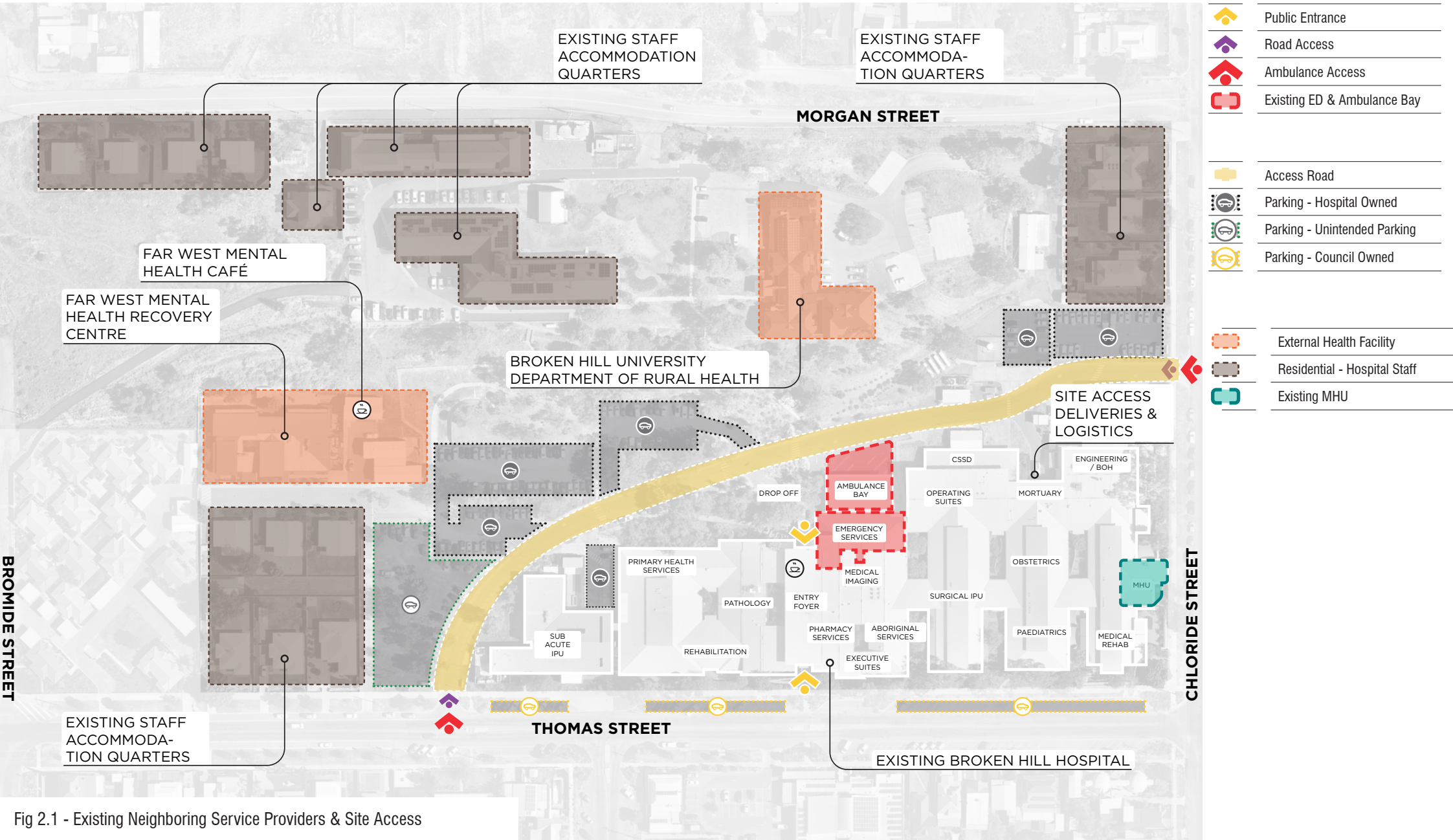


Fig 2.1 - Existing Neighboring Service Providers & Site Access

Zoning	Lot / Section /Plan No.	Area	Legal Owner	Address
R1	4375/-/DP757298	0.15 ha	Health Administration Corporation (HAC)	170-320 Thomas Street
R1	4376/-/DP757298	8.363 ha	Health Administration Corporation	170-320 Thomas Street
R1	3751/-/DP757298	0.12 ha	Health Administration Corporation	170-320 Thomas Street

Fig 2.2 - Title Ownership table

2.0 THE SITE

2.2 SITE SUMMARY

The hospital is located within a R1 General Residential area. The campus occupies the majority of the urban block, bounded by Chloride Street to the West, Morgan Street to the North, Bromide Street to the East and Thomas Street to the south. The main hospital building fronts directly onto Thomas Street.

The hospital campus site is zoned R1 General Residential and the Crystal Street site is zoned B2 Local Centre. Development for the purpose of a ‘health service facility’ is permissible within both zones under the Broken Hill Local Environmental Plan 2013 and the Infrastructure SEPP.

These zones are prescribed zones for the purpose of *State Environmental Planning Policy (Transport and Infrastructure) 2021*. Certain forms of development for the purposes of a health services facility may be carried out as development without consent by a public authority under section 2.61 of the SEPP as long as they are within the boundaries of an existing health services facility and meet a number of pre-conditions, including a 15m building height limit above existing ground level and a 5m setback in this circumstance.



PHOTOGRAPH LOCATIONS



1. SITE AERIAL VIEW (NORTH)



2. AERIAL VIEW TO SUB ACUTE BUILDING (SOUTH WEST)



3. VIEW TO UNFORMAL CARPARK (WEST)



4. VIEW TO MAIN HOSPITAL FROM PATH (NORTH)



5. VIEW TO DROP OFF

- 01/ Overall site - Aerial view taken from the north
- 02/ Sub-Acute Building (completed in 2014) - Aerial view taken from the south
- 03/ Unformal carpark - View from the west of the site
- 04/ Existing ED and main hospital - View from walkway (north)
- 05/ Existing drop-off zone
- 06/ Overall site - Aerial view taken from the east

2.0 THE SITE

2.3 SITE INVESTIGATIONS

Heritage

The upper development comprises of older building stock that has become separated from the main hospital when it was rebuilt on the corner of Thomas and Chloride Streets in 2000. This upper portion comprises several buildings subject to heritage consideration.

Summary of heritage significance as follows.

- a. A. Former Refractory c. 1890;
- b. Former Operating Theatre c.1890 (now a staff residence);
- c. Elleoura Lodge (former women’s and children’s nightingale wards) c. 1890;
- d. Workshop Store (former x-ray and change rooms) c.1890;
- e. Kincumber House (former nurses quarters) c. 1890, c. 1907, 1941 and 1961;
- f. Corrindah House (former nightingale wards) c. 1930;
- g. Sister Drummond Memorial Park c.1949.

Buildings of high significance should be retained and reused. These include A. Former Refractory c. 1890, B. Former Operating Theatre c.1890 (now a staff residence), C. Elleoura Lodge (former women’s and children’s nightingale wards) c. 1890, D. Workshop Store (former x-ray and change rooms) c.1890 and F. Corrindah House (former nightingale wards) c. 1930.

The relationship between the remaining core group of 1890’s buildings (Refractory, Operating Theatre, Elleoura Lodge - former women’s and children’s nightingale wards - and Workshop) is of high significance. The spaces between these buildings and the connection to the Morgan Street street-scape should be retained and new buildings should not be constructed in these spaces.

The works covered in Broken Hill masterplan do not impact the heritage area.

Built Form

The buildings on the campus range from 1 to 3 storeys in height with structures predominantly 1 and 2 storey. The taller buildings are centred in the campus. The most recent development to the site range from 1 and 2 storeys + basement and plant levels.

Property structures surrounding the campus are generally 1-2 storeys. They are mainly low-scale developments ranging from residential development.

Topography

The site is divided in two parts: upper plateau and lower plane with a lower datum of 306 AHD (Australian Height Datum) at the north to 322 AHD to the south. The western portion of the site remains largely undeveloped due to a much steeper slope from 329 AHD down to a level of 306 AHD.

The upper development is heritage/older building stock, separated from the main hospital when it was the new building was rebuilt on the corner of Thomas and Chloride Streets in 2000.

The topography of the site is an issue with the connection of the upper and lower plateaus. Staff see the hill as an obstacle thus creating a divide between Executive and Clinical functions. The development has low grade pedestrian links. Two pathways traverse the topography and these make use of vestige components. Remnant roadways and retaining wall structures exist between the two building areas.

Environment

Broken Hill has a hot desert climate. While winters in Broken Hill are relatively mild, overnight it can be cold with moderate frost. Summers can be variable, mostly hot and dry with occasional summer storms.

Sun and Wind

The main hospital building runs from east-northeast to west-southwest, with the major axis having favourable solar exposure. The existing building has a series of courtyards providing access to sunlight and views for the occupants.

Development Area

The hospital has potential expansion zones generally to the north of the main hospital building. This expansion zone is restricted to some degree by the road bisecting the site and will require a degree of road realignment in order to maximise these development opportunities. The relationship between the Emergency Department and the Operating Theatres is logical, as such, no change to this relationship is proposed as part of the masterplanning consideration, however expansion of these units could be achieved by increasing the building footprint to the north into the current open space.

As the site has significant level changes across it, options in the future to add a second level of development strategically placed to connect both upper and lower portions of the site. This connection requires consideration of heritage building fabric on the upper portion of the site and the need to continue connections from east to west via the at-grade internal roadway.

Several locations around the site are available to provide additional carparking capacity if required, this could take the form of a multi-deck, or split level development to maximise the opportunities around the graded/benched levels.

Biodiversity, Flood, Bushfire , Groundwater & Mine Subsidence

Located in a rural urban environment, there is limited vegetation and existing biodiversity. Courtyards and surrounding vegetation is from recent landscape works, with little to no remnant vegetation in existence across the site.

There is no existing Council flood study for the area so 1 in 100 year and Probable Maximum Flood (PMF) levels are not available. Publicly available LiDAR data has been reviewed and the upstream catchment is limited by the ridgeline of Morgan Street to the north west. There are overland flow routes along Chloride Street and Thomas Street away from the site. The floor level for the MHU (309.5m) is 1m above that of the existing hospital (308.5m). This provides 300mm freeboard to the overland flow route along the internal road and car parking areas in line with the Broken Hill DCP requirements.


The overall flood drainage of the city is utilising street profile as surface drains. During a heavy event, the crown of the roads are intended to maintain the flow of traffic while the deep kerbs and graded roads provide a flow path. The street burden of water is a direct result of the roof area which is discharged at any one time and in the case of the hospital roof area that is substantial. The tenability of roadways during extreme events is directly impacted by the large scale roof area of the hospital and this issue will need further consideration in any expansion strategy (e.g. retention tanks). Whilst the site is not located in a flood zone area, the design team has considered overland flow across the site.

The hospital site is located within the town boundary and is not a bushfire prone land. This development is not subject to the Rural Fires Act 1997 and is not a Special Fire Protection Purpose requiring approval under section 100B of that Act.

Geotechnical investigation was completed from 1st to 5th of February 2023. The subsurface conditions encountered across the site comprised of shallow Fill overlying natural soil, overlying bedrock.

Consultation of the Mine Subsidence Advisory website indicates that the Site is not located within a Mine Subsidence District and on the basis we understand that the Site is not affected by mine substance





3.0

ARCHITECTURAL DESIGN

3.0 ARCHITECTURAL DESIGN

3.1 CONCEPTUAL FRAMEWORKS

The proposed MHU will utilise materiality to reference the surrounding environment and terrain of the Broken Hill region.

The design has developed within the framework set out in the “Better Placed Design Guide for Health”, working to deliver an effective, engaging and sustainable health facility. Although the masterplanning and a large portion of the design works were completed prior to the release of the new design guidelines, the design takes into consideration the principals contained within as part of the STH best practice in design of health facilities.

These principles include:

Design for Dignity

Maintaining, supporting and enhancing dignity is fundamental to design for healthcare.

The MHU and ED redevelopments have been designed with consumer dignity in mind. Approach, environment and clinical areas have been progressed through the co-design process with an focus on maintaining privacy and dignity of the consumer.

Design for Wellbeing

Well-designed health facilities and places contribute to the wellbeing of patients, visitors and staff. Connections to the natural environment are particularly important.

Design for the MHU has focused on maintaining connections to the natural environment. Within the limitations of the secure consumer zone, an emphasis has been placed on connection to the environment while ensuring privacy and security considerations are satisfied. The ED waiting area connects directly to the adjacent landscaped forecourt, improving the current enclosed waiting space by providing linkages to external environments.

Design for Efficient and Flexible Delivery of Care

Health facilities are places of highly skilled, demanding and complex work. The design of physical infrastructure of these places must support busy people undertaking difficult, demanding and stressful tasks and providing complex clinical care.

Both the ED and MHU have been designed to provide efficient delivery of healthcare services. Mindful of the limitations of staff availability in regional areas and the budget requirements, the design response is enhancing clinical care and capacity with current staffing levels maintained.

Design with Country

Designing with Country means putting the Aboriginal experience, concept and expression Country at the centre of the design processes.

The design team and HI have engaged with the regions Indigenous community regularly through the design process to ensure the clinical and staff areas are appropriate and welcoming for the Aboriginal community. Please refer to the Connecting with Country report for details of this engagement process.

Design for the Neighbourhood and Surrounding Environment

Health facilities contribute to the public spaces of our cities, towns, suburbs and regions.

Although largely contained within the existing hospital grounds, significant upgrades to the internal circulation roadway are included in the redevelopment, improving pedestrian and vehicular approaches to the hospital and connection with the community.

The design response provides complimentary materiality, referencing the broader landscape and built objects of Broken Hill in the selection of construction materials. The form of the new additions the form is of low height and mass, in line with the general character of the surrounding neighbourhood.

Design for Connection

Health facilities are important nodes within urban, transport, community and health networks. The design of facilities should enhance connection and catalyse the development of these networks.

The upgraded circulation roadway will improve connections of the hospital to the surrounding community and adjacent health services both within and adjacent the hospital site.

Design for Sustainability

Green building, places and precincts improve individual health outcomes for patients, staff and visitors by providing optimised interior environments, improved air quality and a reduction in the toxins associated with construction. Well-designed green building also have a well-documented positive effect on physical and mental health and wellbeing. This, in turn, reduces the societal cost of health care.

The new MHU build is designed with environmental principals at the forefront. Natural light and ventilation has been considered through the design process, with solar orientation, thermal performance and other passive design principals being included within the envelope. The ED refurbishment is more limited in scope due to the refit being substantially within the existing envelope, but new mechanical and electrical systems being installed will provide improved efficiency within the current hospital.

Key principles of the SWMHIP program will be incorporated within the design, with an emphasis on:

- Therapeutic Environments
- Arts Vision and Arts in Health
- Green Space and Outlook
- ESD Future Proofing
- Innovation in Spatial Design and Technology

Design outcomes supporting the SWMHIP objectives are centred around achieving a connection from the internal spaces to the surrounding landscape, with views from bedrooms into landscaped areas to the north and south.

Views along the main corridors within the unit will connect internal spaces for circulation to the surrounding environment, allowing staff and consumers to orient themselves within the space and connect to diurnal rhythms.

Spaces connecting the administration and clinical functions will provide safe and welcoming transition both into and out of the unit, framing views into the landscaped areas adjacent.

ESD principals are built into the design through careful consideration of the local climatic condition, siting the building to manage daylight, heat gain and cross-flow ventilation as appropriate.



Fig 3.1 - Proposed Mental Health Unit Courtyard Render

3.0 ARCHITECTURAL DESIGN

3.2 SITE SETTING

The Broken Hill Hospital site is set in a regional urban centre. Scale and form of the facility will work with the existing surrounding building fabric.

Broken Hill Hospital is located to the north of the town, surrounded by largely residential development. Associated administration and community health functions are housed in a separate facility, the Broken Hill Community Health Centre, close to the town centre.

The Hospital site is broadly divided in two parts, the upper plateau and lower portion of the site upon which the main hospital facility is located. The western portion of the site remains largely undeveloped due to a much steeper gradient across this section.

Broken Hill has a hot desert climate. While winters in Broken Hill are relatively mild, overnight it can be cold with moderate frost. Summers can be variable, mostly hot and dry with occasional summer storms.

The new MHU building fronts onto existing carparking and access roadway, necessitating consideration for patient privacy, views from the unit and separation of the consumers from the passing vehicle and pedestrian traffic.

3.3 CONNECTING WITH COUNTRY

Through the concept design stage of the Broken Hill Hospital Redevelopment we have attended two Aboriginal Focus Group sessions hosted by the local Indigenous community at Maari Ma Health Aboriginal Corporation in addition to a presentation to the Broken Hill Aboriginal Working Party. Further feedback from Aboriginal representatives was provide during the Arts Working Group on the cultural background of the community with knowledge sharing around cultural elements, totems and the interaction between Indigenous groups and more recent cultural arrivals..

The focus group were provided with an overview of the design progress to date, with plans, 3D representations and architectural visualisations provided to communicate the design intent.

Key concepts of the design were discussed, with perspectives provided by the cultural representatives around the function of the space, shared experiences and important design considerations. The design discussion covered not only the architectural form, but model of care, Aboriginal employment opportunities, landscape response and integration of the community based mental health team.

The next Aboriginal Focus Group is scheduled to meet in late August. As the design progresses, it is important that the engagement with the Broken Hill Aboriginal community is maintained to ensure design integrity and cultural appropriateness is realized in the built outcome.

Information sessions and workshops will continue as the design process progresses, enabling community engagement and integrating design feedback.

Refer to Appendix B for Connecting with Country Report

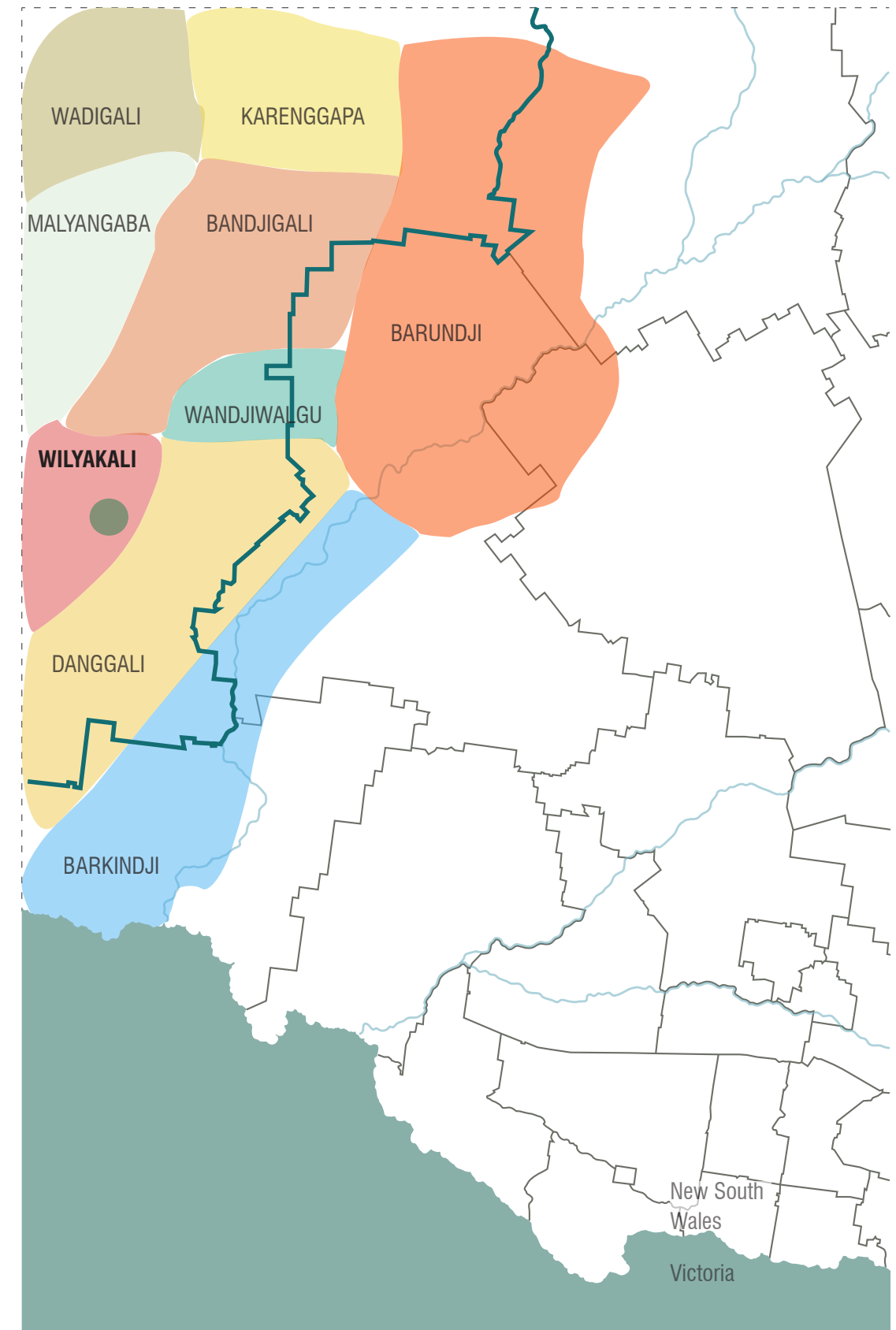


Fig 3.1 - Indigenous Nations Map

3.0 ARCHITECTURAL DESIGN

3.4 MASTERPLAN

The endorsed masterplan option is Option A

Positive outcomes for both the ED and MHU were considered in the masterplan. The ED, given current appropriate connections and adjacencies to required services will be redeveloped in place. As access to the unit can be managed from various sides, it is possible to maintain ED operations through the development time-line.

The endorsed option A site for the MHU allows the key objectives of the SWMHIP to be incorporated. While in close proximity to the relevant existing hospital functions, the facility will have the opportunity to have its own identity which aligns with the service profile.

/ Creation of therapeutic environments is possible through careful planning and design of the building form, as the site is generous enough to allow for several options to be explored.

/ Arts in health can be incorporated into the new development through consultation with staff, consumers and the local community.

/ Green space and outlooks can be created through connection to existing and new landscape. This may be through dedicated secure courtyards and framed views to the surrounding landscape and vegetation.

/ Consideration to ESD principles will allow a forward looking and future proofed facility that embodies sustainable active and passive design solutions.

/ Innovative spatial designs will work to improve consumer experience and outcomes while providing the added benefit to create a safe and flexible space for all, consumers, staff and visitors.

- Further development of the zone is required regarding the following constraints:
- The public entry / assessment area, its relationship with the new MHU, the Sub Acute building and the main hospital
 - Internal roadway and carparking reconfiguration, their impact to the overall hospital parking strategy
 - The reticulation of in-ground services and the impact to those as per the survey
 - Master Plan sequencing to accommodate MHU and ED works

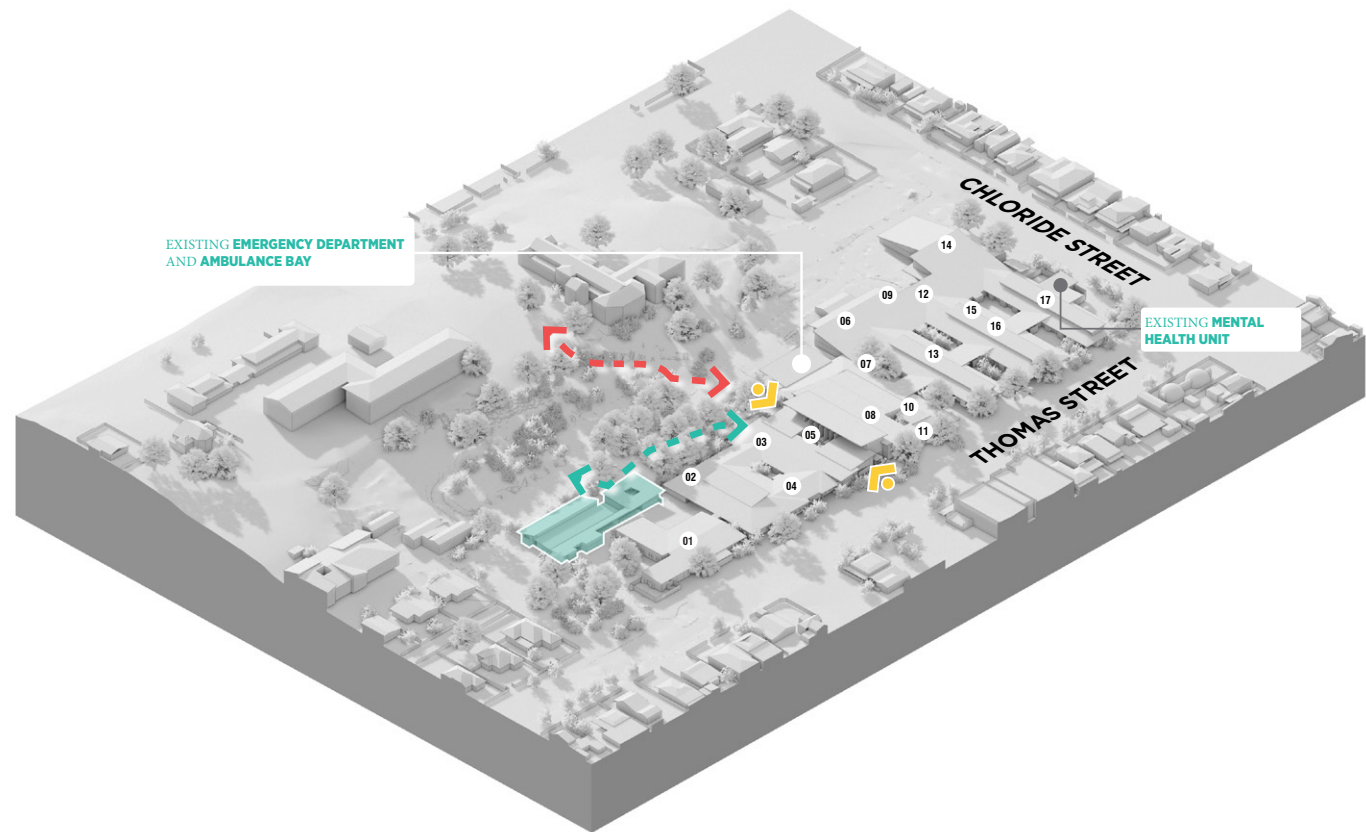


Fig 3.2 - Endorsed Masterplan - Preferred Option A

	Access route to Staff Accommodation
	Pedestrian access route from Main Hospital Entry
	Public Entrance

01 SUB ACUTE IPU	02 PRIMARY HEALTH SERVICES	03 PATHOLOGY	04 REHABILITATION	05 ENTRY FOYER
06 OPERATING SUITES	07 MEDICAL IMAGING	08 PHARMACY SERVICES	09 CSSD	10 ABORIGINAL SERVICES
11 EXECUTIVE SUITES	12 MORTUARY	13 SURGICAL IPU	14 ENGINEERING / BOH	15 OBSTETRICS
16 PAEDIATRICS	17 MEDICAL REHAB			

3.0 ARCHITECTURAL DESIGN

3.5 ACCESS & CIRCULATION

Entry to the campus is via Thomas Street and Chloride Street. Emergency vehicle access is at the north end of the main hospital. On-site parking is sprawled through the site. There are dedicated accessible parking bays as well as bicycle racks.

The hospital can be accessed using various modes of transport. There is a Bus Stop and taxi rank located at the Main Entrance of the hospital. Servicing and waste disposal circulate the site in multiple locations and on separate occasions facilitate oxygen deliveries and car fleet transportation. The Emergency Department Planning does not affect existing On-Site parking.

3.6 CARPARKING

Existing parking facilities consist of fleet parking, general parking, dedicated afternoon / night shift staff parking as well as on-street parking adjacent to the site. This is illustrated in Figure 3.3. There are a total of 155 parking spaces (including fleet parking) within the site and approximately 129 on-street spaces on Thomas and Chloride Street adjacent to BHHS.

Of these spaces, there are 22 spaces marked for accessible users, just under 8 per cent of supply. Aside from some spaces on Thomas Street that have 5-minute parking limits, the available parking is largely unrestricted.

As part of the new Mental Health Unit road relocation works, the traffic consultants' advice is a new roadway alignment is proposed to the west of the MHU, leading the circulation roadway through the northern parking module and connecting to existing circulation roadway once past the MHU. This roadway will be sized to accommodate movement of the required service vehicles as well as fire brigade access.

HI is seeking to deliver the MHU with no changes to total on-site parking, and therefore to construct 38 new parking spaces along the new roadway to the west of the MHU.

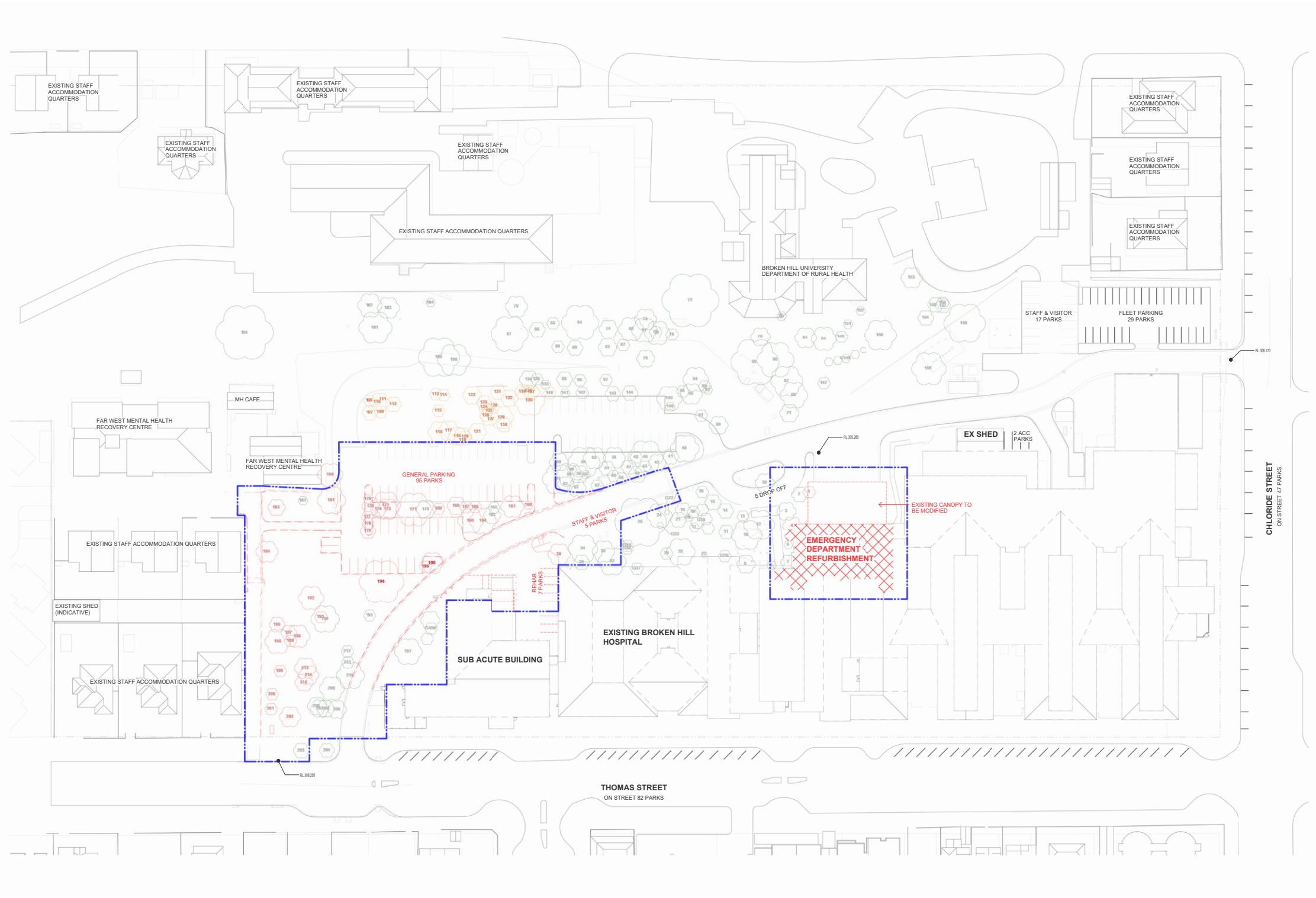


Figure 3.3 - Demolition Plan / Car Parking Changes

3.0 ARCHITECTURAL DESIGN

3.7 STAGING

The new Mental Health Unit and Emergency Department will be constructed under a single main contract. Whilst the two departments may start concurrently it is anticipated that the Emergency Department will have a longer build time owing to the staging that will be required to keep the ED operating safely.

The diagrams in Figure 3.4 show preliminary construction zone and staging considerations. Prior to the MHU main building works commencing, service diversions and site preparation will be required. Survey works are currently underway to define in-ground service locations in that area. There will also be a configuration of the internal roadway and carparking reconfiguration to ensure the hospital has no net loss of car spaces through the build phase.

The works to the Emergency Department requires an extension of the existing building to the north. The department is constrained to the east, west and south by existing hospital functions. With an expansion to the north, the ambulance bay canopy structure can be reconfigured for reuse.

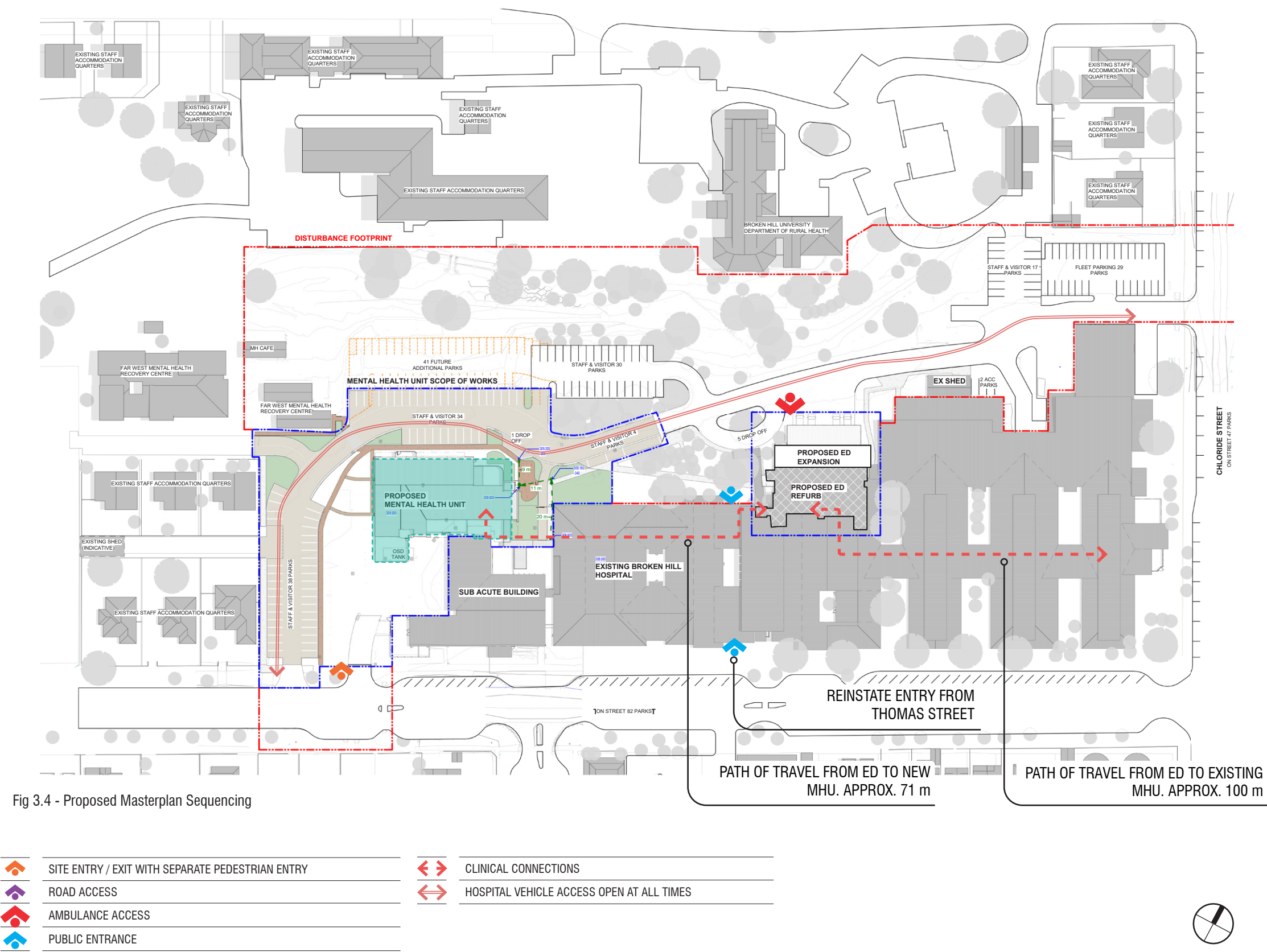
An ambulance drop off will be required through the build phase, the team have agreed temporary ambulance bay locations which are shown in Figure 3.4.

3.8 BUILDING LEVELS

The new MHU building will be set 1000mm above the existing hospital floor level. This level works with the existing grade to minimize earthworks and allow for compliant vehicular and pedestrian traffic around the site.

Cross flow drainage, falls and civil levels are coordinated to manage storm-water across the site and around the building.

Emergency Department redevelopment aligns floor levels with the existing main hospital footprint. Minor regrading of the ambulance bay is anticipated to achieve levels/slopes required for safe ambulance loading and unloading.



3.0 ARCHITECTURAL DESIGN

3.9 WAYFINDING

The entry sequence of the unit will be via the existing carpark and driveway, accommodating a new pedestrian pathway to the new main entry. The waiting area will make the transition between the public Broken Hill hospital site and the private Mental Health Unit, providing natural light and landscape views. A partly glazed corridor is linking the front of house / staff areas and the inpatient / support areas. This element will be treated to create a dialog with the landscape, participating to the patient journey through recovery. The private areas will be secure, as per the staff areas.

3.10 BUILDING DESIGN

Based on the local context, the building envelope expression is informed by the natural landscapes of Broken Hill. Reflecting its surroundings and aiming to provide a ‘home feeling’ for the consumers, the built form will be integrated to the existing scale of local architecture.

The focus is to create the best possible surroundings for patients as well as staff, by ensuring ample light throughout the building, external outlook, access to nature and outdoor spaces.

This allows consumers and staff to connecting visually with ground, sky and community, acknowledging key connection with Country principles.

- The following is incorporated to promote health and well-being:
- Natural tactile materials with a soft palette that is brought inside.
- Natural light through skylights and north facing courtyard.

Design themes will be carried through to the ED redevelopment reflecting principles developed for the MHU. Integration with the existing façade is through utilising complementary brickwork and similar construction methodology so as to integrate with the existing form and materiality without trying to achieve an exact match.

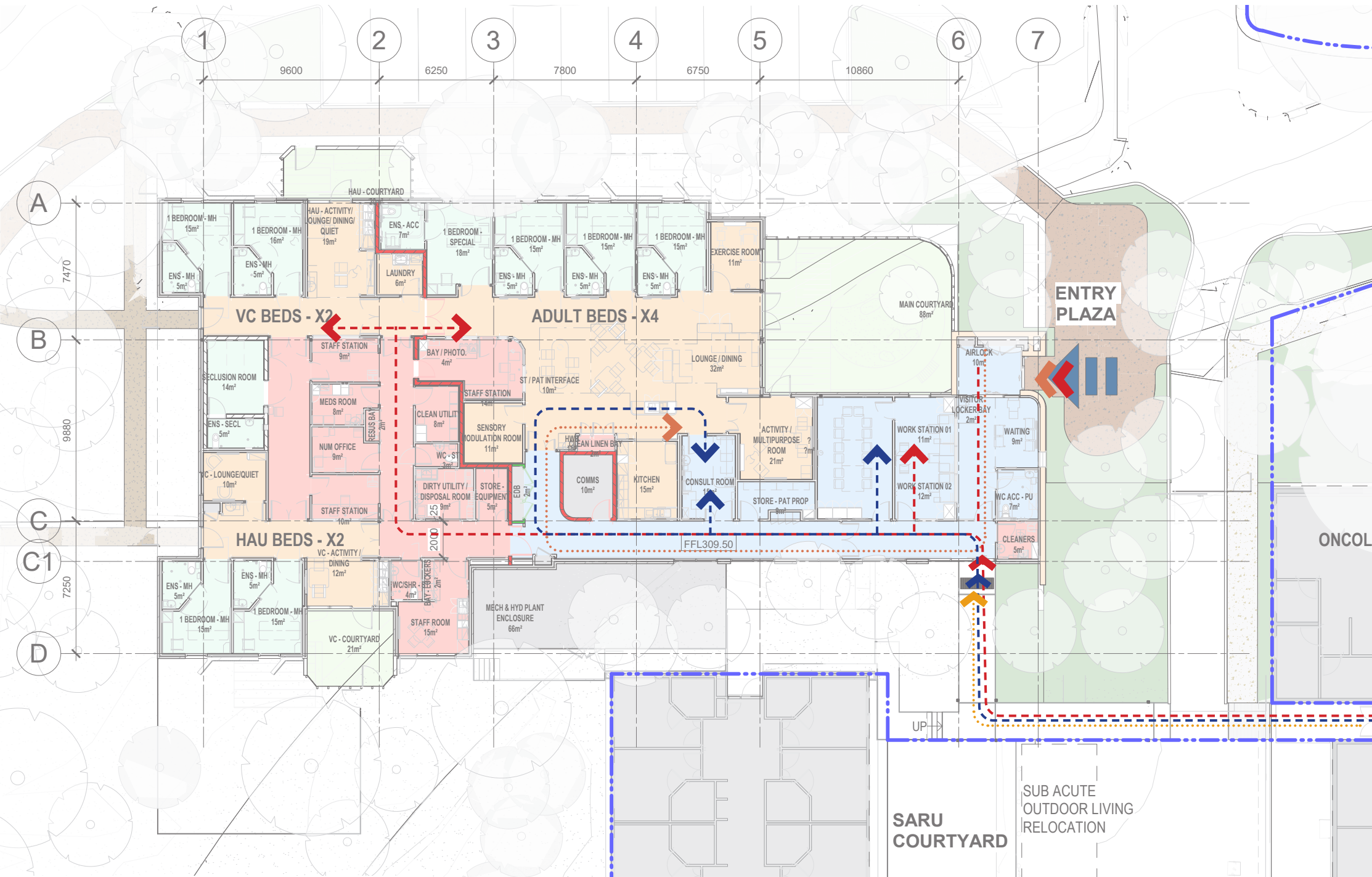


Fig 3.5 - Proposed MHU Floor Plan and Clinical Flows

	CLINICAL FLOWS LEGEND
	PATIENT FLOW
	STAFF FLOW
	VISITOR FLOW
	BOH FLOW

3.0 ARCHITECTURAL DESIGN

3.11 MHU BEDROOMS, PRIVACY AND PATIENT AMENITY

The balance between privacy and openness around the Mental Health Unit is important in reducing the stigma of the unit being a place of confinement, allowing controlled views that do not compromise the privacy of the consumers from their rooms.

Working with the available area on site, the new Mental Health Unit is adjacent to the new main internal circulation road on the Hospital campus and associated carparking. As the mental health consumers require a high degree of privacy and separation from noise and distractions of passing pedestrian and vehicular traffic, it is important that the building design responds appropriately to this requirement. The MHU bedrooms are separated from the roadway and footpath by a fence and a 4.5m wide landscape buffer. The louvre-style fencing will provide a hard landscaping element to provide the required visual separation between the road, parking and bedrooms. Angled blade fencing, in conjunction with the façade fin elements will control views into and out from the bedroom windows. The angled blades will allow for a degree of visual permeability that doesn't compromise on the privacy of consumers, restricting clear views into consumer rooms.

The proposed landscape buffer to the southern side of the fence will soften explicit views of the fence over time from consumer rooms, establishing vegetated views incorporating a selection of carefully considered plant species. These species will be reflective of the landscape character of Broken Hill and further aid in creating a positive healing environment.

Site levels between the road and building also assist in maintaining privacy of the unit, with the bedroom windowsill sitting 1300mm above the roadway. This change in level will remove the risk of car headlights disturbing consumers during night hours. This change in level will also allow consumers to see beyond the 2100mm high fence from their rooms, reducing feelings of confinement and isolation.

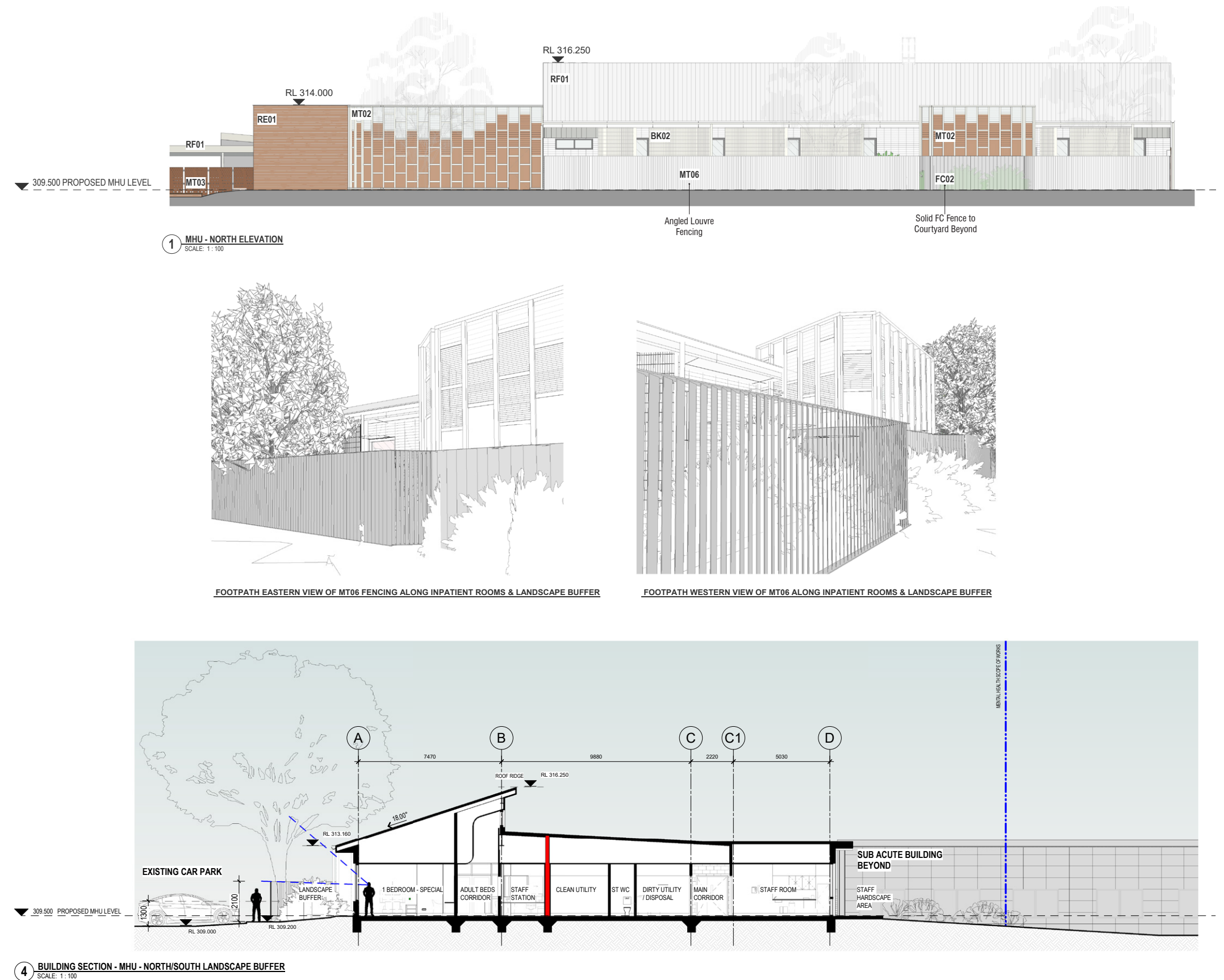
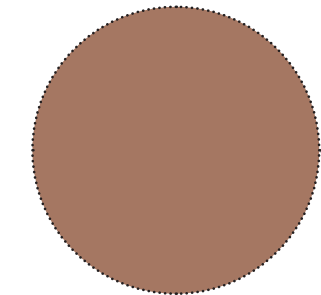


Figure 3.6 -MHU Bedroom Privacy Screen

3.0 ARCHITECTURAL DESIGN

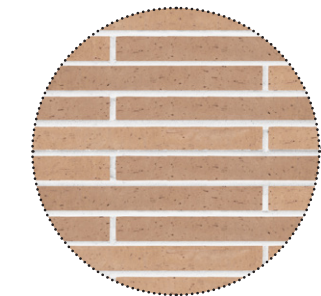
3.12 FACADE DESIGN & MATERIALS
MENTAL HEALTH UNIT



METAL SCREENING SYSTEM



RAMMED EARTH WALL (TBC)



BRICK PLINTH



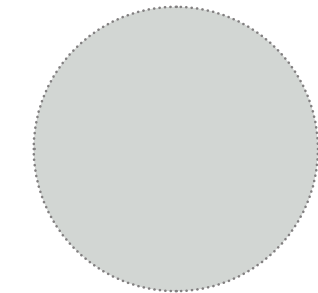
ARTWORK



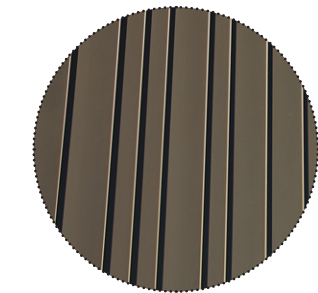
01 / Proposed Schematic Design - Entry Pavilion

3.0 ARCHITECTURAL DESIGN

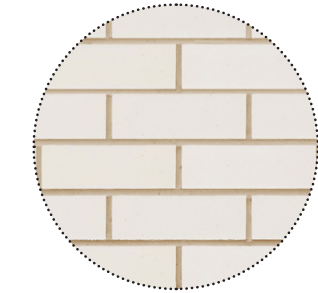
3.12 FACADE DESIGN & MATERIALS
MENTAL HEALTH UNIT CONT.



COLORBOND FASCIA & ROOF



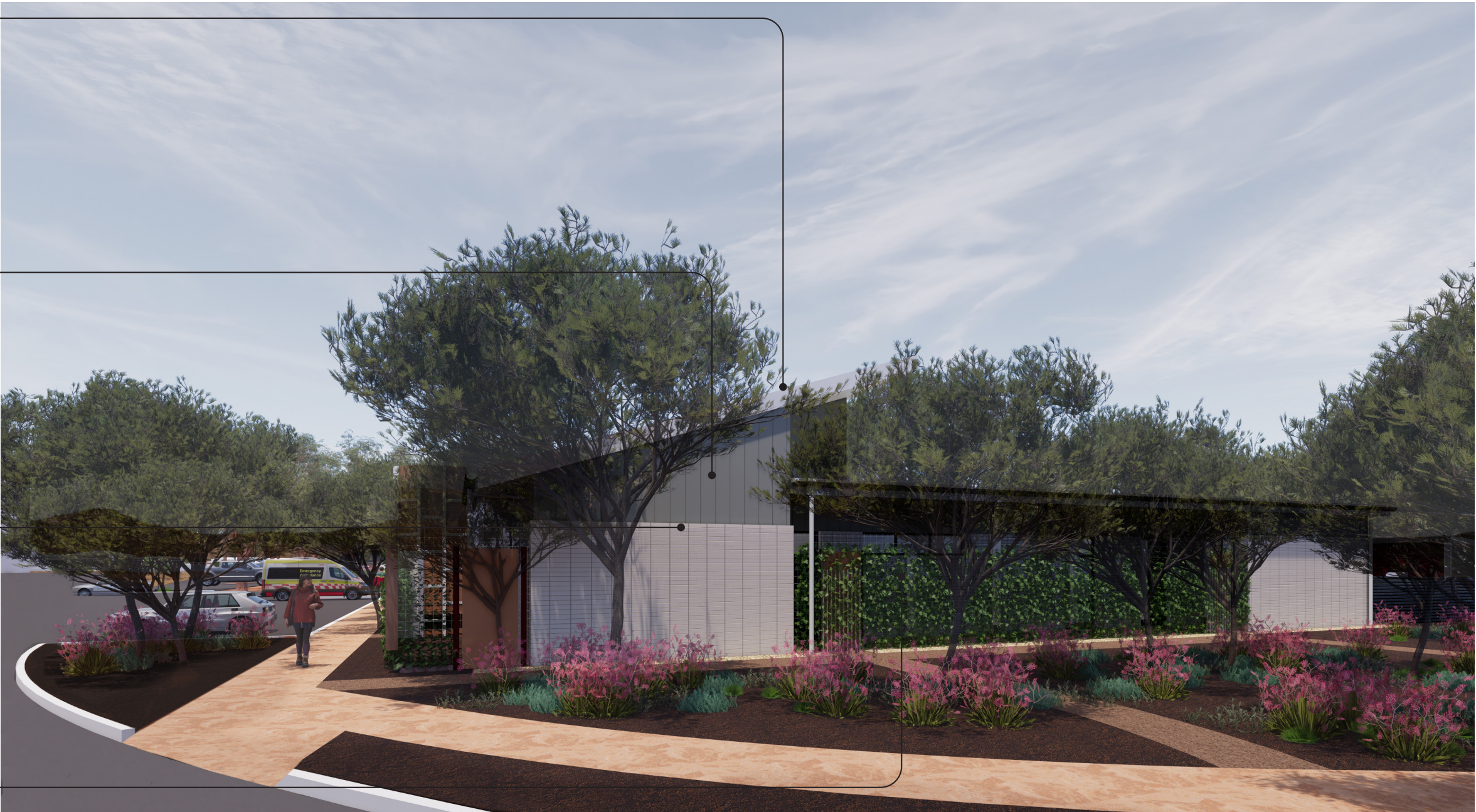
METAL WALL CLADDING
PANELS



BRICK VENEER WALL



LANDSCAPE SCREENING
SYSTEM



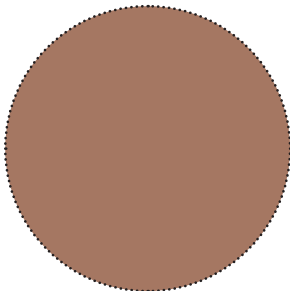
02 / Proposed Schematic Design - Carpark / Bedroom interface

3.0 ARCHITECTURAL DESIGN

3.12 FACADE DESIGN & MATERIALS
MENTAL HEALTH UNIT CONT.



RAMMED EARTH WALL (TBC)



METAL SCREENING SYSTEM



GRANITE LANDSCAPE SEATING (TBC)



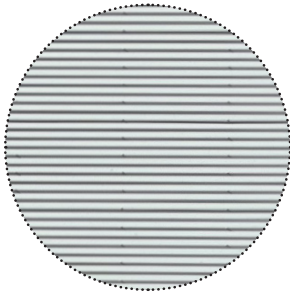
LANDSCAPE PLANTING



03 / Proposed Schematic Design - Main Courtyard

3.0 ARCHITECTURAL DESIGN

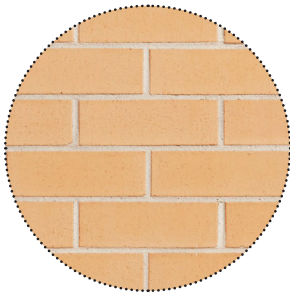
3.13 FACADE DESIGN & MATERIALS
EMERGENCY DEPARTMENT



CORRUGATED METAL FACADE
TO MATCH EXISTING



NEW EMERGENCY SIGNAGE



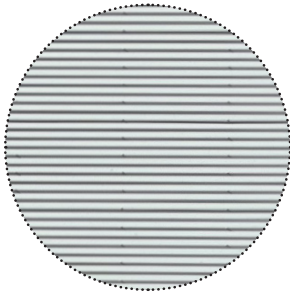
BRICKS TO MATCH EXISTING



04 / Proposed Schematic Design - Emergency Department Pedestrian Entrance

3.0 ARCHITECTURAL DESIGN

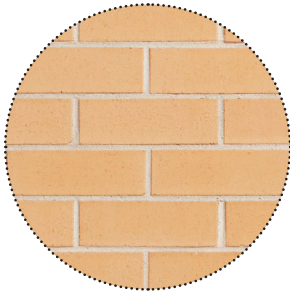
3.13 FACADE DESIGN & MATERIALS
EMERGENCY DEPARTMENT CONT.



CORRUGATED METAL FACADE
TO MATCH EXISTING



NEW EMERGENCY SIGNAGE



BRICKS TO MATCH EXISTING



05 / Proposed Schematic Design - Emergency Department Drop-off

3.0 ARCHITECTURAL DESIGN

3.14 INTERIOR DESIGN - MENTAL HEALTH UNIT

The interior concept compliments the architectural approach to draw inspiration from the land’s expressive forms and colours and the celebration of local heritage shaped by its community.

From these key ideas, we derive shapes (curves) and colour palettes (earthy) that we can applied within our internal spaces. Creating a welcoming environment that provides safety and homely comforts to its occupants and visitors alike.

The proposed interiors concept will introduce evidence-based design features such as natural and soft lighting, views of nature, a mixture of private and communal spaces, adaptable furnishings, excellent way-finding, warm colours, natural looking materials and positive distractions aimed to improve experiences and outcomes.

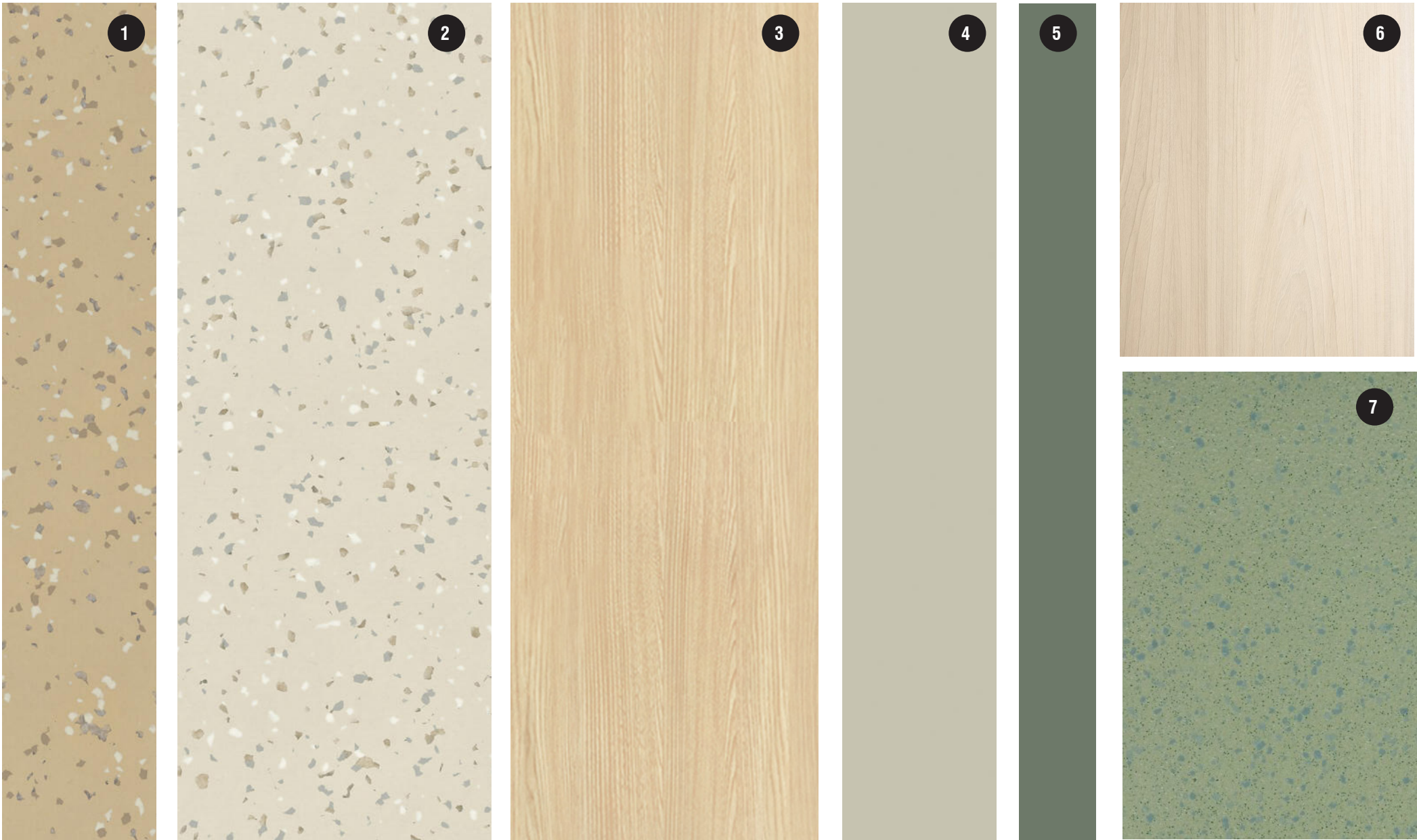
- Accessibility diversity
- Sky, sky county uninterrupted vista/views panorama
- Artwork integrate into the building fabric.
- Local artists
- Inclusion of carers and consumers
- A welcoming and calming environment
- Dignity & respect
- Privacy
- Varying levels of security
- Blending internal and external spaces
- Site specific
- Social interaction
- Easy unobtrusive supervision
- ESD & future-proofing
- Robustness



01/ Image top left: Raft Loft, New York, Dash Marshall
02/ Image bottom left: Private Residence, Kennedy Nolan
03/ Image top centre: Laminex collaboration CJH
04/ Image centre left: source unknown
05/ Image centre right: Studio Wok

01/ Image: Private Residence - Al-Jawad Pike

3.14 INTERIOR DESIGN - MENTAL HEALTH UNIT CONT.



- 01/ Homogenous floor vinyl, bedroom entry
- 02/ Homogenous floor vinyl, bedroom
- 03/ Timber-look laminate, bedhead & bedroom joinery
- 04/ Feature colour joinery laminate and paint finish
- 05/ Ensuite door protection, highlight colour
- 06/ Feature wall vinyl at ensuite hand basin
- 07/ Homogenous sustainable slip resistant floor vinyl to ensuite
- 08/ High performance vinyl upholstery, loose furniture
- 09/ Armchair, concept image



3.0 ARCHITECTURAL DESIGN

3.14 INTERIOR DESIGN - MENTAL HEALTH UNIT CONT.

- 01/ Homogenous floor vinyl, border, bedroom side
- 02/ Homogenous floor vinyl, border, kitchen side
- 03/ Heterogenous timber-look vinyl flooring
- 04/ Heterogenous floor vinyl, feature colour
- 05/ Timber-look laminate joinery and wall panelling
- 06/ Feature ceiling finish and joinery
- 07/ Feature joinery and paint finish
- 08/ Door frame highlight colour
- 09/ High performance vinyl upholstery, loose furniture
- 10/ High performance vinyl upholstery, loose furniture
- 11/ Domed wall light, concept image
- 12/ Dining chair, concept image
- 13/ Dining table, concept image
- 14/ Modular sofa, concept image



3.0 ARCHITECTURAL DESIGN

3.14 INTERIOR DESIGN - MENTAL HEALTH UNIT CONT.



01/ Proposed Schematic Design - Bedroom
02/ Proposed Schematic Design - Main Lounge/ Dining
03/ Proposed Schematic Design - Entry

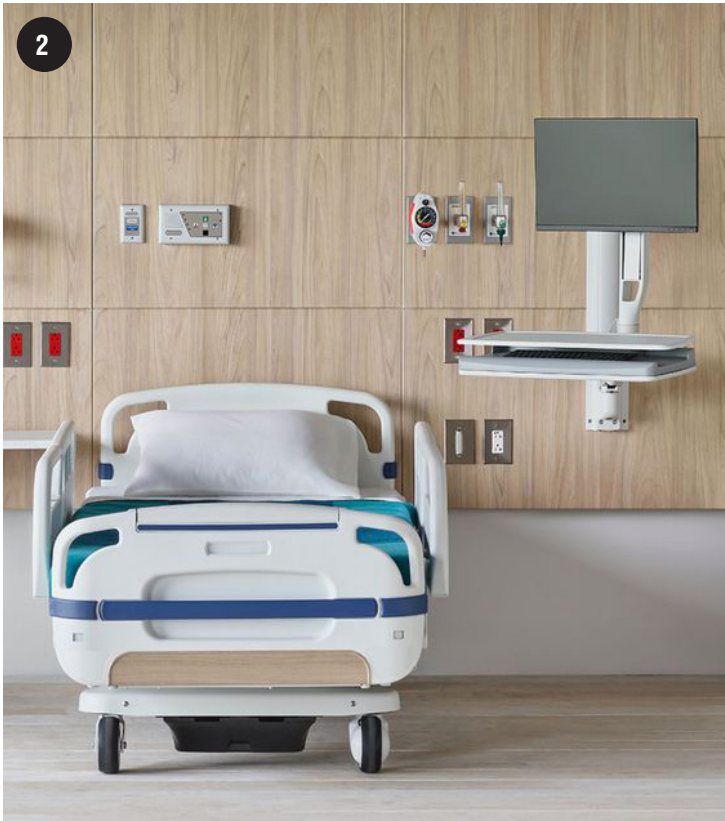
5.0 ARCHITECTURAL DESIGN

3.15 INTERIOR DESIGN - EMERGENCY DEPARTMENT

The interior design concepts are a continuation of the architectural design approach, drawing inspiration from the local landscape’s expressive forms (curves) and colours (earthy).

The design uses evidence-based tools to create a calming, welcoming and inclusive and safe environment to improve experiences and outcomes for all users of the facility.

- Natural lighting and views to outside where possible
- Natural - looking materials
- Calming, natural colour palette
- A mixture of private and communal spaces
- Artwork as positive distraction and connection to community



CONCEPT IMAGES

- 01/ Concept image
- 02/ Concept image
- 03/ New Bedigo Hospital - STH & Bates Smart
- 04/ Macksville Hospital - STH

5.0 ARCHITECTURAL DESIGN

3.15 INTERIOR DESIGN - EMERGENCY DEPARTMENT
CONT.

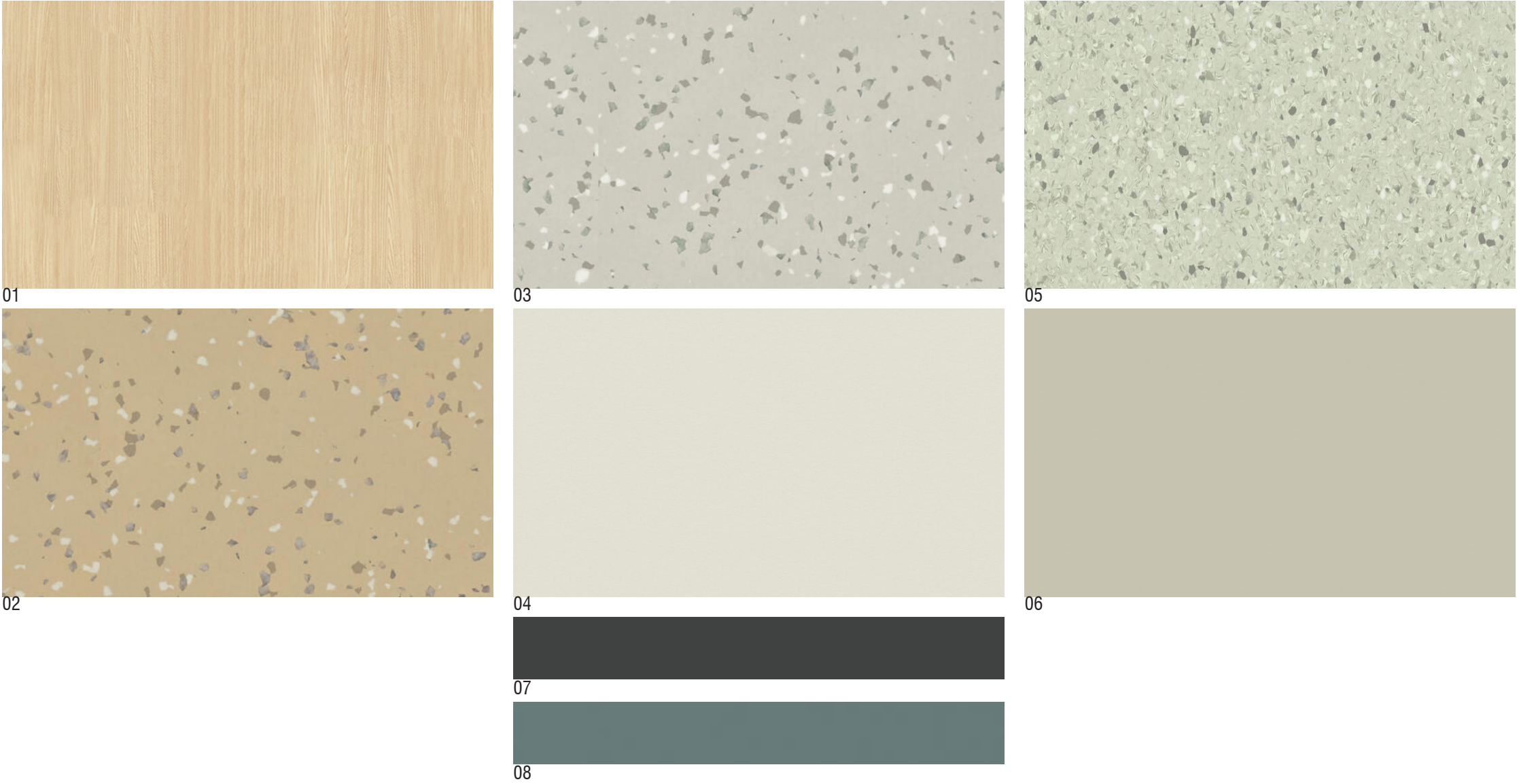
The interior design materials palette will draw inspiration from the colours of the land local to Broken Hill.

An organic, calming, neutral base palette will be used with carefully placed accent colours.

Graphic artworks and artworks integrated into the building fabric will provide an opportunity to add yet another layer of colour, texture and pattern.

The interior finishes have been selected to meet the following criteria:

- Warm and natural-looking appearance
- Robust and serviceable
- Sustainable



CONCEPT IMAGES

- 01/ Timber-look laminate wall panelling & joinery
- 02/ Floor vinyl, accent colour
- 03/ Floor vinyl, general colour
- 04/ Joinery laminate colour
- 05/ Floor vinyl, accent colour
- 06/ Joinery laminate colour
- 07/ Door & window frames & other architectural trims
- 08/ Joinery feature colour

3.0 ARCHITECTURAL DESIGN

3.16 FUTURE PROOFING AND EXPANSION

The MHU and ED are designed to conform to the current AusHFG's. As far as possible, rooms will be standardized to allow for a consistent manner of operation and maximise future flexibility.

The MHU has been sited in such a way to allow extension to the west of the unit, increasing bedrooms to the north and south of the floor-plate, with support spaces infilling the areas between.

An additional 4-6 bedrooms can be accommodated within the available space.

3.17 CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

Natural Surveillance:

- The proposed MHU and ED extension is set back from the street. This creates clear sidelines from the entrances to the street.

Access Control

- Shared spaces will be secured from public via key/electronic access control. Residents of the accommodation units will have access to these areas.
- The sight-lines from the street to the complex are relatively clear, further discouraging intruders.

Territorial Reinforcement

- Landscape treatments will further define the boundary between public and private space, discouraging accidental thoroughfare through this area.

Space Management

- The use of aluminium profiled cladding reduces the effective surface area for graffiti.
- The material choices require minimal upkeep. This will allow the units to look newer for longer, reducing the chance of vandalism.

Controls

- The pedestrian pathways to the units will be lit. The entrance gates to the units and shared space will be illuminated to deter intruders.
- The lighting will be provided by energy efficient fittings with switches to save energy

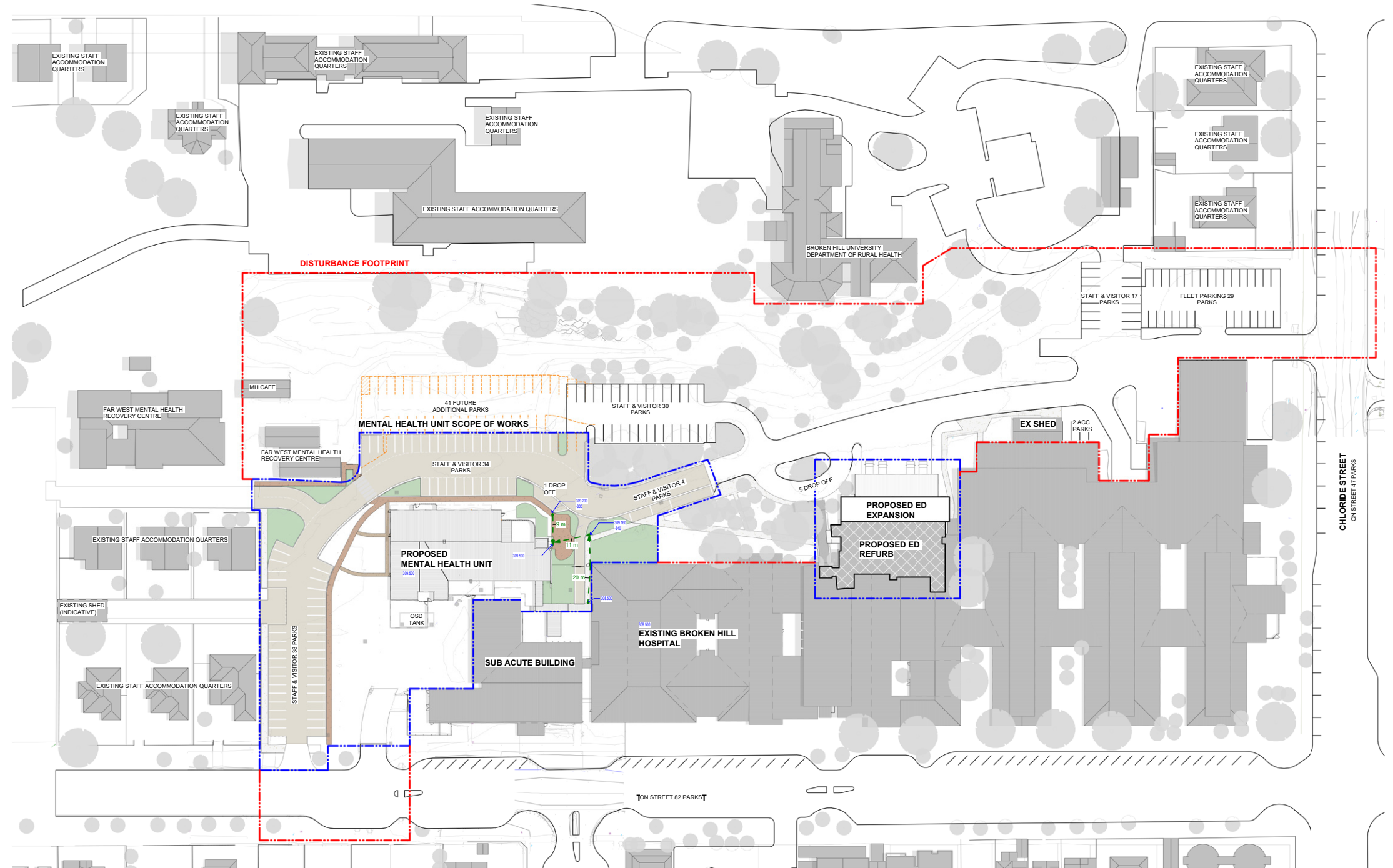


Fig 3.7 - MHU Proposed Site Plan

APPENDIX A – ARCHITECTURAL DOCUMENTS

APPENDIX B – CONNECTING WITH COUNTRY REPORT

