

SSD Architects Report

Macksville Hospital

Prepared for

NSW Health Infrastructure



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CONTENTS:

INTRODUCTION	3
SITE LOCATION	5
TITLE OWNERSHIP	6
SCOPE OF WORKS	8
MASTERPLAN	9
SITE LAYOUT AND BUILDING LOCATION	10
BUILDING FORM AND MASS	11
ARCHITECTURAL DESIGN	14
LANDSCAPE	16
VIEW ANALYSIS	17



INTRODUCTION

The new Macksville District Hospital will be part of the Mid North Coast Local Health District (MNCLHD) and the Coffs Clinical Network. The site chosen for the development of the “new” Macksville Hospital is located in North Macksville adjacent to the route of the new Pacific Highway that has recently been constructed and opened.

The site has good links to the Northbound “on ramp” of the Pacific Highway and therefore has easy access to Coffs Harbour Hospital. It is also easily accessible from both Macksville and Nambucca Heads via local roads.

Macksville is approximately 465km North of Sydney and 445km south of Brisbane.

Macksville District Hospital is in the Nambucca Local Government Area and provides services to Macksville, Nambucca Heads and Scotts Head.



Fig 1 Location Plan



Macksville District Hospital is designated as a Level 3 Rural Hospital and services are to include 24 hour Inpatient and Emergency Departments, low complexity low risk Birthing and Maternity services and day only Surgical Services and a limited range of Community and Allied Health, all based at the hospital.



SITE LOCATION

The site for the new hospital building is located to the northern area of what was the RMS site compound and batching plant for the construction of the new Pacific Highway. The specific area of the site chosen is the highest portion of the larger site and is at RL 14.0, well above the PMF level of RL8.6.

The access road to serve the Hospital will come from the southern part of the site with roundabout access from Macksville and Nambucca Heads, and access to the Pacific Highway travelling north to Coffs Harbour.



Fig 2 Site Location



TITLE / OWNERSHIP

The site chosen as the location for the new hospital development can be legally described as Lot 2 DP 258324 and Lot 3 DP 258324,

In its existing state the site comprises a Concrete Batch Plant located in the north-central portion of the site. The Concrete Batch Plant has associated dirt access roads and drainage ponds. The current RMS Site Compounds are located at the highest part of the site to the north.

The topography of the site varies with the central portion (the area that was the site of the Concrete Batch Plant) having an RL 5.0 rising to approximately RL 20.0 to north (where the RMS site offices are currently located) and RL 18.0 to the south-west.

Directly to the south east of the batch plant is a low lying swamp area.

The character of surrounding context is predominantly rural although it is in a state of transition with the construction of the new Pacific Highway and associated civil and infrastructure works. To the north is farmland, to the east is bushland, to the south is farmland and the west is the new Pacific Highway. To the west of the highway is the Old Coast Road, bushland and the Newee Creek.

As discussed previously in this report the site is to be serviced by a new southbound off-ramp and roundabout from the new Pacific Highway.

While access from Macksville is to remain along the Old Pacific Highway, a new access road will be constructed to connect the new hospital site with both the new Pacific Highway and local roads serving Macksville and surrounding areas.



TITLE OWNERSHIP CONTINUED

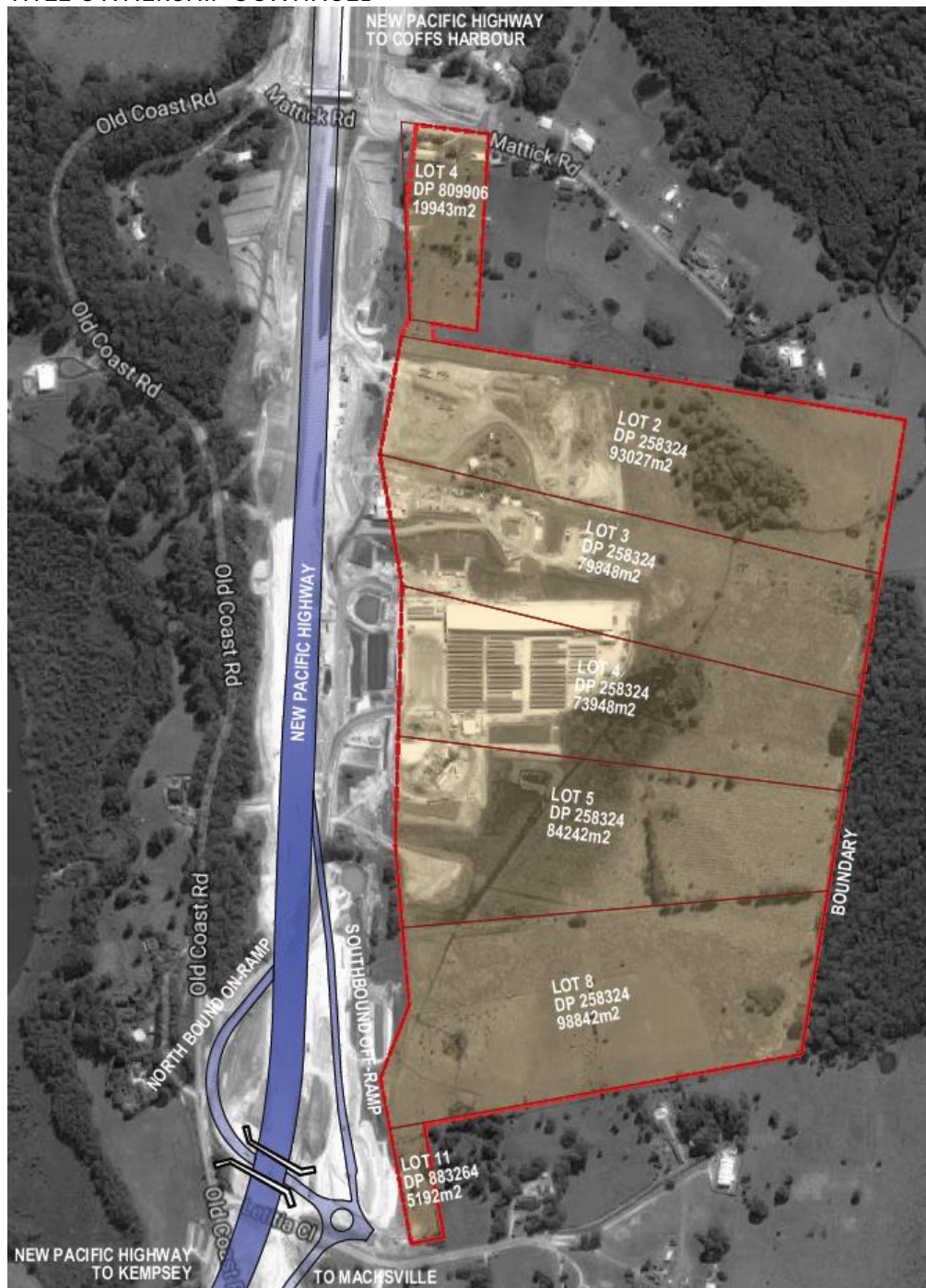


Fig 3 Lot Numbers



SCOPE OF WORKS

The new Hospital building is a 3 storey Acute Service building that includes a plant room, external car parking. The main hospital will consist of the following departments:

- Emergency Department
- Aboriginal Liaison
- Medical Imaging
- Pharmacy
- Inpatient Unit Acute
- Inpatient Unit Sub-acute
- Inpatient Unit Maternity
- Mother and Babies Unit
- Community Health
- Cancer Support Group
- Pathology Collection
- Mortuary
- Café / Multi-faith
- Staff Dining
- Main Entrance
- Administration
- Education
- Medical Records
- Engineering
- Supply / Loading Dock
- Back of House
- Environmental Services
- Food Services
- Security Room
- Volunteers
- Services and Plant



MASTERPLAN

The Clinical Masterplan diagram was based on the following:

- A main entrance foyer that will act as the hospital reception, cafe and space linking all departments
- Interdepartmental adjacencies for patient movement but also staffing requirements
- Ground Floor access for Emergency Department
- Maternity Links to Emergency and Inpatient Acute
- Inpatient links to each other and Maternity
- Community Health links and shared facilities with Inpatient Sub Acute
- Ground Floor access for IPUs giving very easy access to open on grade courtyards
- Creation of a 24 hour zone for the hospital, and a first floor comprising of areas that can be closed off after hours
- Administration on First floor to allow Perioperative suites to be expanded into that space in future

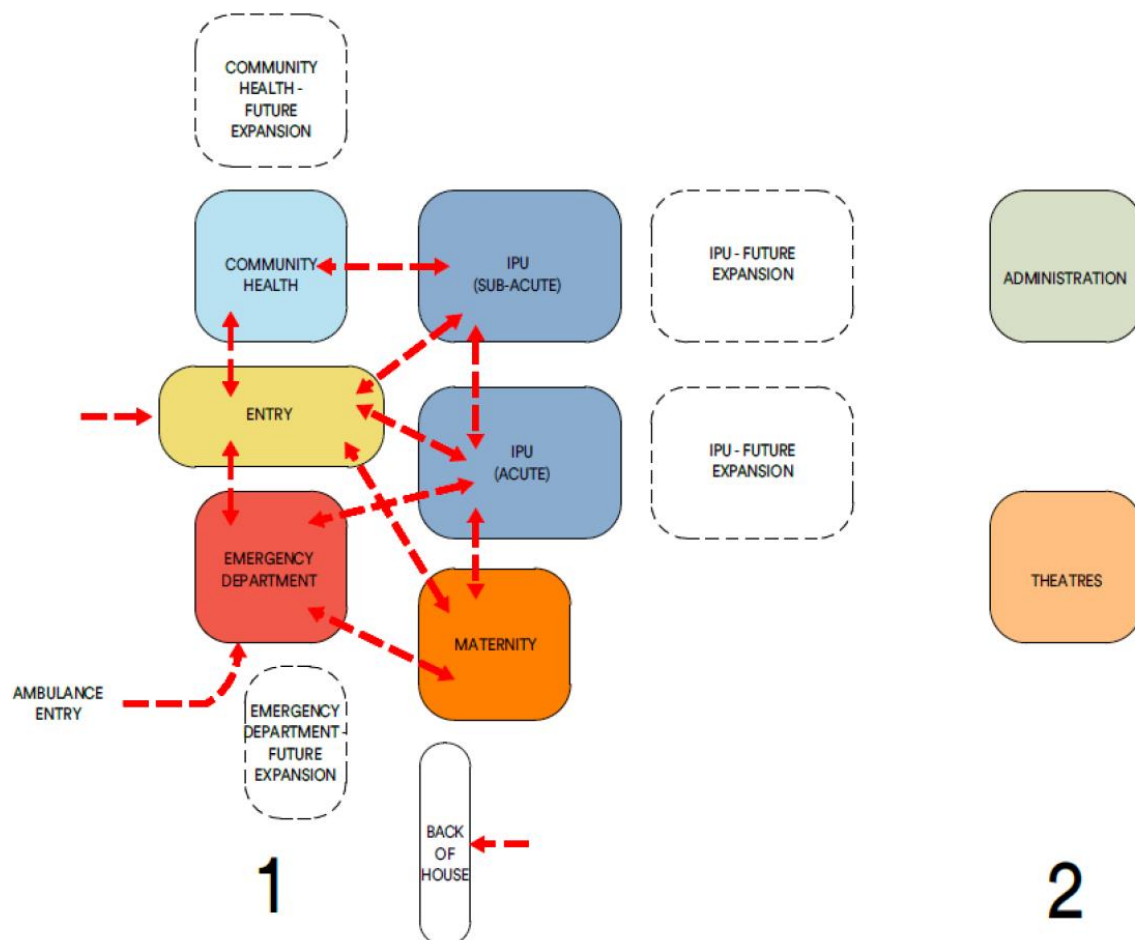


Fig 4 Clinical Masterplan



SITE LAYOUT AND BUILDING LOCATION

The Building is located on the site with consideration to minimising the “cut and fill” maintaining district views and having the clearest vehicular and patient flows to the building.

The site is at the highest point in the local area with only low height residential buildings adjacent to its location. These are some over 300 metres away from the building. Although this is a distance away, landscaping will be required to ensure privacy for both is maintained. The building is set back approximately 125m from the new Pacific Highway, and is approximately 105m away from the northern lot boundary, as indicated in Fig 5 below.

The Access Road leading to the Hospital has the Emergency Department as the first point of stop. This means any Ambulances and Public dropping patients off have a clear visual link and easiest instant access in an emergency.

The next area is the public Car Park which is separated from the Emergency drop off by a hard and soft landscape strip. The public access to the hospital main entry is made visually by the canopy the flows from the double height entrance foyer along the car park. The elevation is softened by planting to the front of this, which also shields the Interview Rooms in this part of the plan from prying eyes.

The Service road and access for deliveries to the back of house wraps around the back and falls down towards the lower level. This service yard, which is more than 4 metres below the ground floor, is shielded from the car parking by landscaping.

The building is located to have as little impact to neighbours to the north, and be impacted as little as possible by the noise and traffic of the Pacific Highway.



Fig 5 Location of Building in context with neighbouring properties



BUILDING FORM & MASS

The Building consists of two easily identifiable areas.

1. Area 1 is the three storey element with Back of House servicing areas on the Basement Plan, Community Health, Emergency, Maternity / Mother and Children are on the Ground Floor Levels with Theatres and Hospital Administration on the upper floor.
2. Area 2 is the single storey Inpatient Units area. The building form is derived from the clinical adjacencies and masterplan but the design of the building and departments have been located to maximise the views across the valley and the change in levels of the existing ground.

The height of the Building has been kept to a minimum in order to be sympathetic with the surrounding environment. Plant rooms have been designed to be hidden behind the two storey element rather than on the roof which is the most common design solution

The clinical design and masterplan relationships mean that Theatres and Administration are on the upper floor. The remainder of the building is single level. The two storey element has been located closer to the Highway to act as a buffer for the Inpatient units which make up the bulk of the single storey element.

The plant rooms are located on Basement and Level 1 and are designed to the side of the Theatres department, rather than directly above which is the most common design. The plant area is located at the rear of the two storey element meaning it is largely hidden from the Pacific Highway and from the main access road.

Basement

The contours of the site fall away at the Northern area and the design takes advantage of this in creating a Basement Level Back of House area. This allows all services including electrical plant, Linen, food, oxygen and other Deliveries, Maintenance to be located and accessed separately to the patient areas. The main access road is extended past the public car park access and will serve the Basement service area. All deliveries and servicing of the building will take place in this area, which is hidden from public view on the lower portion of the site.

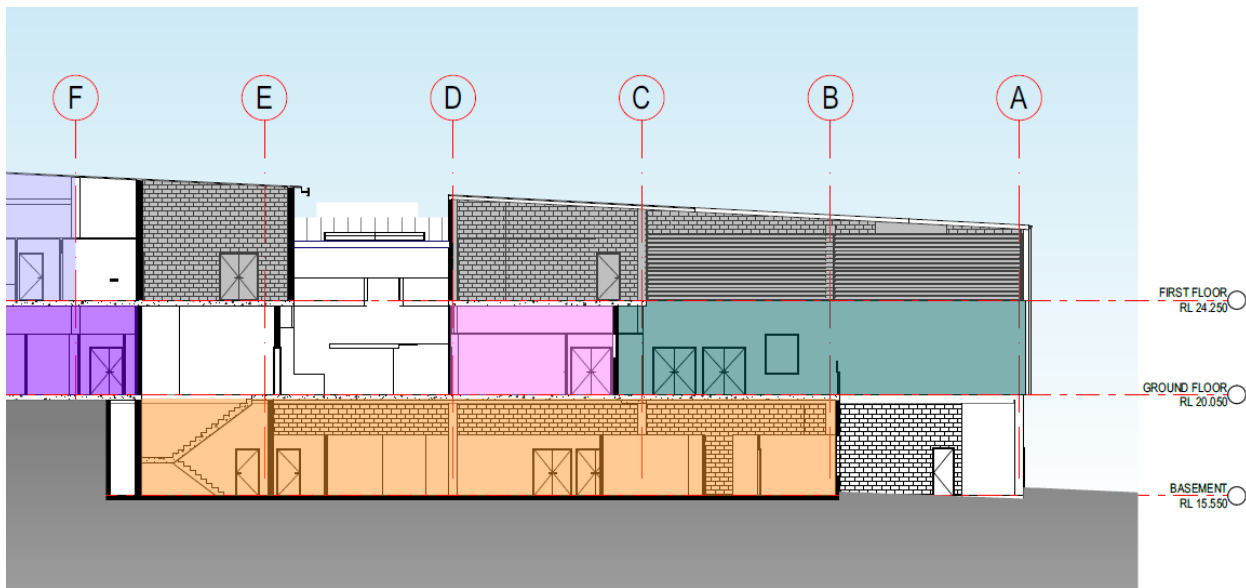


Fig 6 Section showing Basement Level in orange

Area 1 : Two Storey Element

The two storey element includes areas where there is no 24 hour presence and no patients staying overnight. This means that the two story mass of the building shields the In Patient areas, where patients will be staying overnight, from the noise of the adjacent Pacific Highway and Car Parking Areas.

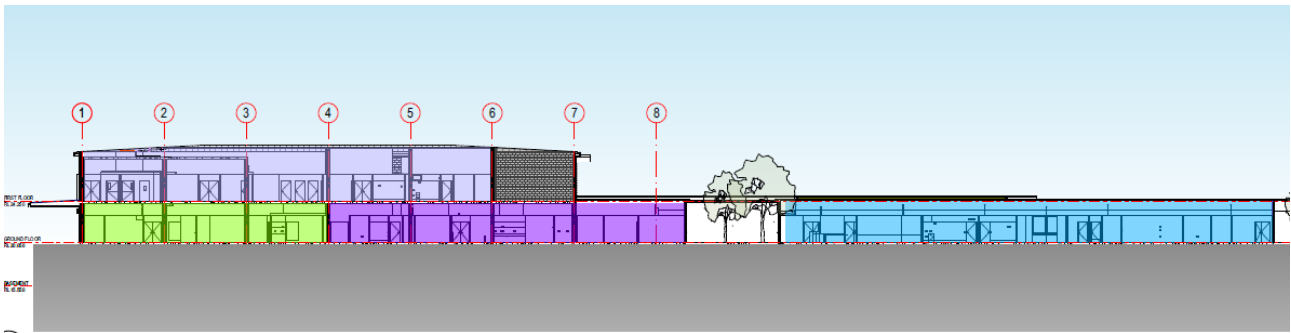


Fig 7 Section with two storey element shielding single story element

Area 2 : Single story Element

The Inpatient Units are designed to be more human scale and have a softer presence. The roof to each roof is pitched with a clerestory window allowing light to permeate into the depth of the units.

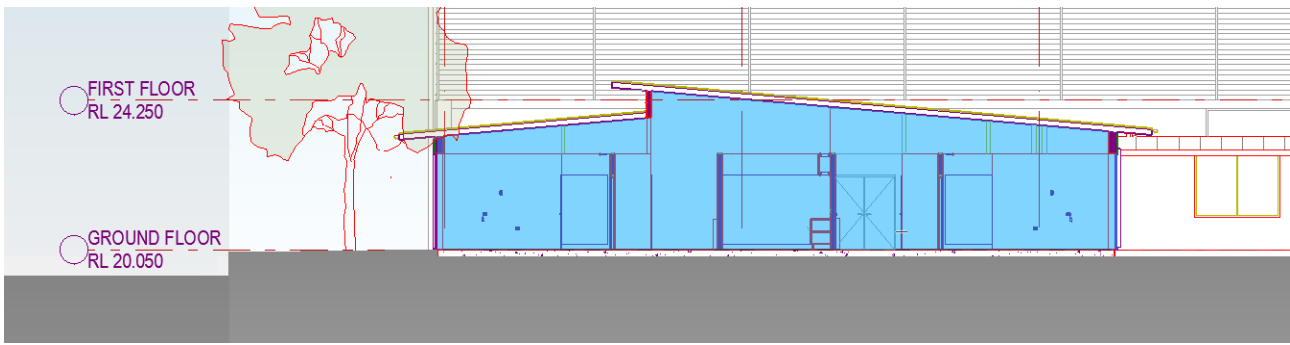


Fig 8 Section through Inpatient Unit



Main Entrance Foyer

The building form and different departments are linked by the double height Main Entrance Foyer. The foyer includes the Reception, Access to Medical Imaging, Maternity and stairs and lifts to Theatres as well as a dining area, views and doors accessing the Healing Garden Courtyard and patient movement through to the two in Patient Units. The foyer is designed to be light and airy with views through to the greenery of the courtyard and is open to the air on two sides.

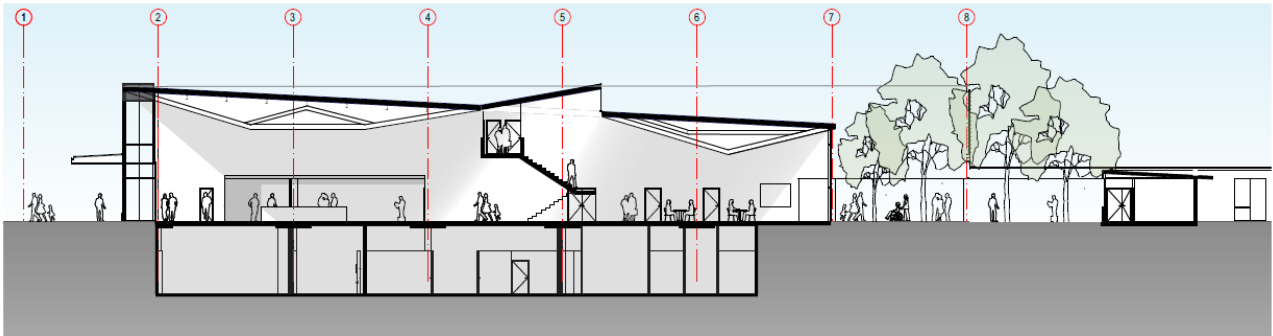


Fig 9 Section through Atrium

Future Expansion

The layout has been designed to allow the In Patient Units to expand horizontally along the ridge as indicated on the Fig Below. The car parking can also be extended if required, but in both cases civil works will be required.

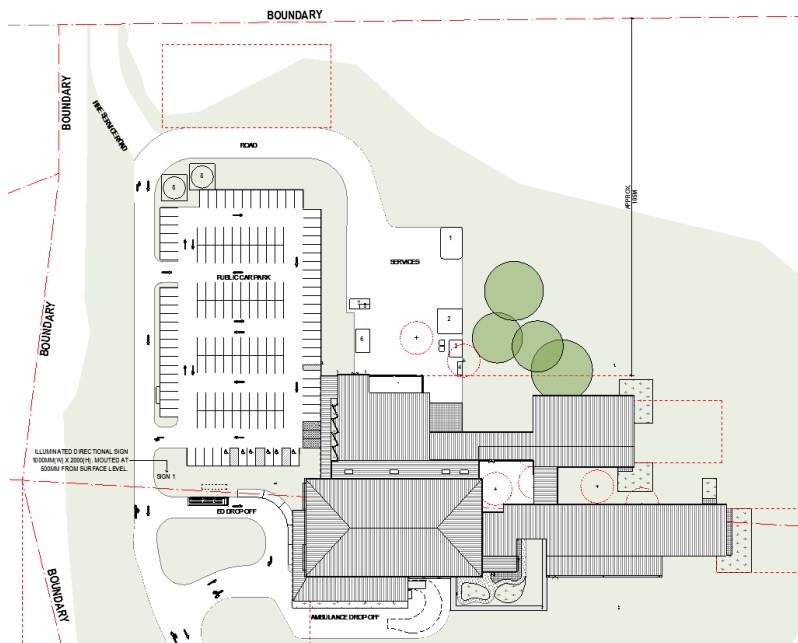


Fig 10 Plan with red dotted lines indicating expansion zones



ARCHITECTURAL DESIGN

Facade

The development of the façade for the Macksville Hospital is regulated by three, (3) key design principles;

- 1 Clinically Driven
- 2 Simple Forms with Articulation
- 3 Access to External Space

Facade

The front elevation is articulated with the Emergency/Theatre departments being slid 8.4m more forward than the remainder of the two storey element. This gives prominence to the Emergency department visually, but also with the use of the canopy from the car park, gives a natural vista and locates the main entrance simply.

The front façade consist of a terracotta style tile with two different colours breaking the façade down. The colours chosen are natural – terracotta and cream - and help to tie the building to the earth. The material chosen is small scale tiles and is of a human scale and will also help break down the mass of the façade.

The use of native landscaping and indigenous artworks at the front soften the facade and also ground the building in nature. The holistic concept of façade, landscaping and signage/art is to use nature and natural materials to make the building site well in the landscape and have significance and relevance to the local area, its history and its indigenous population.

The upper floor of the recessed part, the administration floor had saw tooth windows with views to the north. The saw tooth elements which consist of metal cladding and add articulation to the façade.

The underside of the canopy will be clad in a timber look alike material, again to give the feeling of nature and earth. The canopy leads to the main entrance which is made up of a double height curtain walling with the glass as light as possible to give light tot the main entrance foyer.

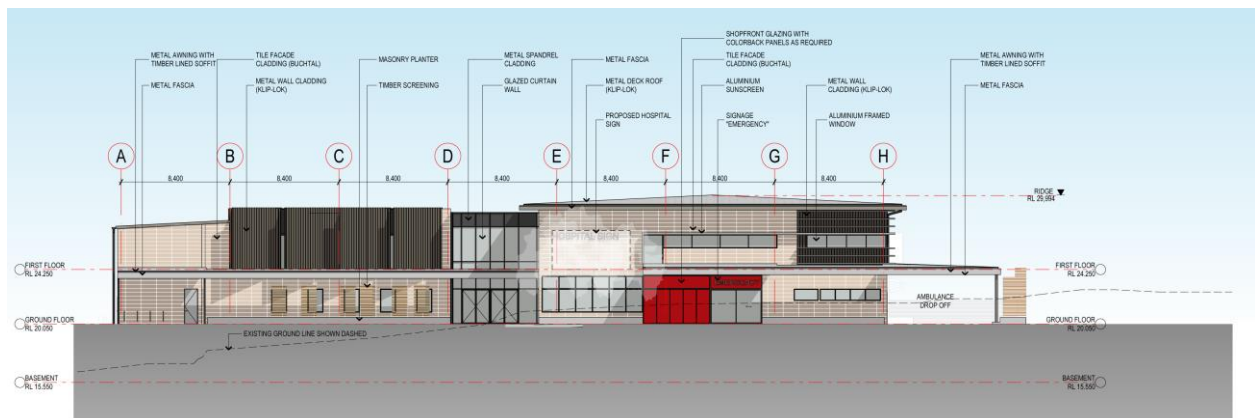


Fig 11 Entrance Elevation



The lower elements of the building, the In Patient units are clad in the same materials but with windows to the rooms punctuating the materials. The windows are large and will give views to the surroundings from the rooms

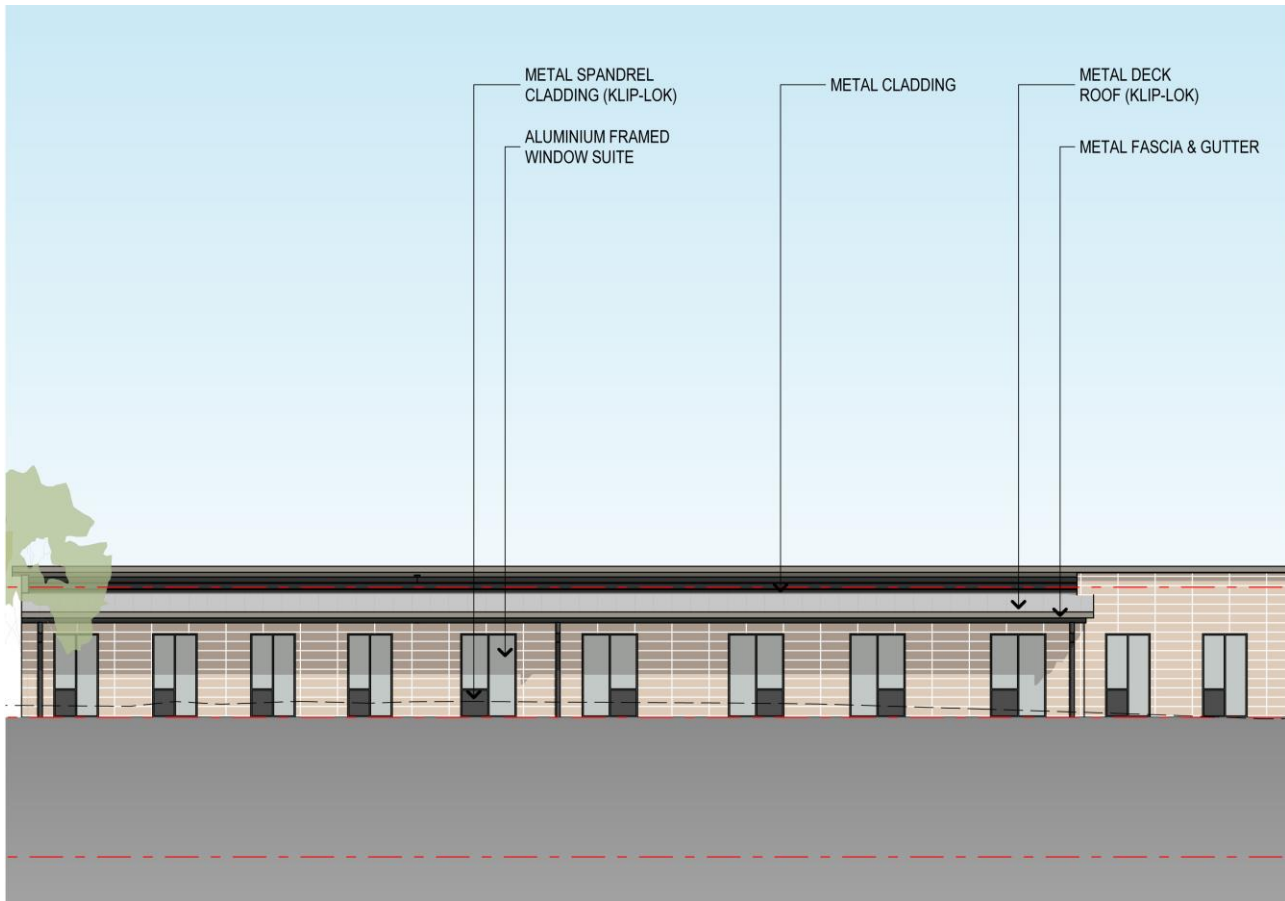


Fig 12 Inpatient Unit Elevations



LANDSCAPE

Landscaping have been proposed throughout the new building to allow occupants with the opportunity to either congregate outside or provide sanctuary when needed. Number of courtyards have been proposed thought out the building:

- At the end of atrium;
- Between IPU Acute & Sub – Acute;
- Between IPU Maternity & Acute.

In addition, areas surrounding the building and car parking will be planted with new landscape.

A 'green wall' will also be planted in front of interview rooms as part of privacy screen to the car park.



Fig 13 Proposed Landscape



VIEW ANALYSIS

The main view of the Hospital will be from the Pacific Highway and from the main access road to the hospital. The front elevation is articulated with the Emergency/Theatre departments being slid 8.4m more forward than the remainder of the two storey element. This gives prominence to the Emergency department visually, but also with the use of the canopy from the car park, gives a natural vista and locates the main entrance simply.

There are no buildings in the immediate vicinity of the new Hospital, so it will be standing alone in landscape, meaning the earthy, natural materials and landscaping soften it against the skyline.



Fig 14 Perspective from entrance road



Fig 15 Perspective from Car Park towards Main Entrance