

**BYRON SHIRE CENTRAL HOSPITAL
DESIGN STATEMENT - ARCHITECTURAL**

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01 Summary

01.01 Design Statement

Development Proposal

The vision for the Byron Shire Central Hospital project is to create a high quality rural hospital campus reflective of clinical and functional best practice that creates a sense of place and particular identity for Byron's local community.

Byron Shire is situated in far north-eastern New South Wales. It comprises most of the catchment area of the Brunswick River and part of the Richmond River. It adjoins the Shires of Tweed (to the north) and Ballina (to the south) and the City of Lismore (to the west). The area of the Shire is 567 square kilometres. In 2006, the estimated resident population of Byron Shire LGA was 30,700 persons.

Development of a Byron Shire Central Hospital (BSCH) has been the basis for comprehensive community engagement over the planning process undertaken over the last 10 years. Land for this purpose has been purchased at Ewingsdale. A Clinical Service Plan was completed in 2013 which builds on previous planning and decisions undertaken for the consolidation of Health Services in Byron Shire.

Development of a new BSCH on a greenfield site provides the opportunity to replace the current Byron Bay District Hospital (BBDH) and Mullumbimby and District War Memorial Hospital (M&DWMH). The development of a purpose-built facility with contemporary functional design and models of care with a significantly larger critical mass of acute, sub-acute, clinical support and primary health services will have the capacity to meet the needs of the Byron Shire community to 2021 and beyond.

This Functional Design Brief (FDB) is based on the current Clinical Services Plan (CSP) which was reviewed by the Ministry of Health in March 2013. The complete CSP is available from the Local Health District.

The key objective of the Byron Shire Health Service (BSHS) redevelopment is to provide capacity to support the agreed scope of clinical care in an environment that facilitates the delivery of contemporary health services. Facility function should allow efficient bed utilisation and staffing to better meet the current and future needs of the catchment.

The existing facilities at Byron Bay and Mullumbimby are out-dated and unsuited to the delivery of modern healthcare and are below the critical mass required to support contemporary models of acute care.

A realignment of services and implementation of new models of care will deliver:

- Reduced need for admission to hospital;
- Decreasing lengths of stay for overnight care;
- Earlier transfer from referral centres for post - acute care and slow stream rehabilitation;
- More services delivered in an ambulatory and community setting;
- More seamless transition along the continuum of care; and
- Strengthening of clinical support and consultation networks with referral and referring centres.

The community will benefit from a more comprehensive range of services delivered in a way that promotes good health, and reduces distress and disability by improving independence.

Development of the Functional Brief was based on the following groupings;

1. Acute Care: Critical Care; Inpatient and Ambulatory Care;

2. Maternity;
3. Primary Care and Community Health, including Mental Health and Drug and Alcohol;
4. Surgery and Sterilising;
5. Mental Health Non Acute Inpatient Unit
6. Clinical Support; and
7. Non- clinical Support.

The Architectural Design Principles in support of this vision are:

- Providing a healthy environment for all involved in healthcare.
- Maximising the site opportunities for natural light, views to natural vegetation.
- Green space, maintaining and utilising for the benefit of all.
- The new building will reflect best practice in terms of engineering services
- Ensure development provides harmony and balance with the surrounding areas.
- Adopt the principles of Ecologically Sustainable Design (ESD) in accordance with NSW Health and State Government policy.

Value Proposition

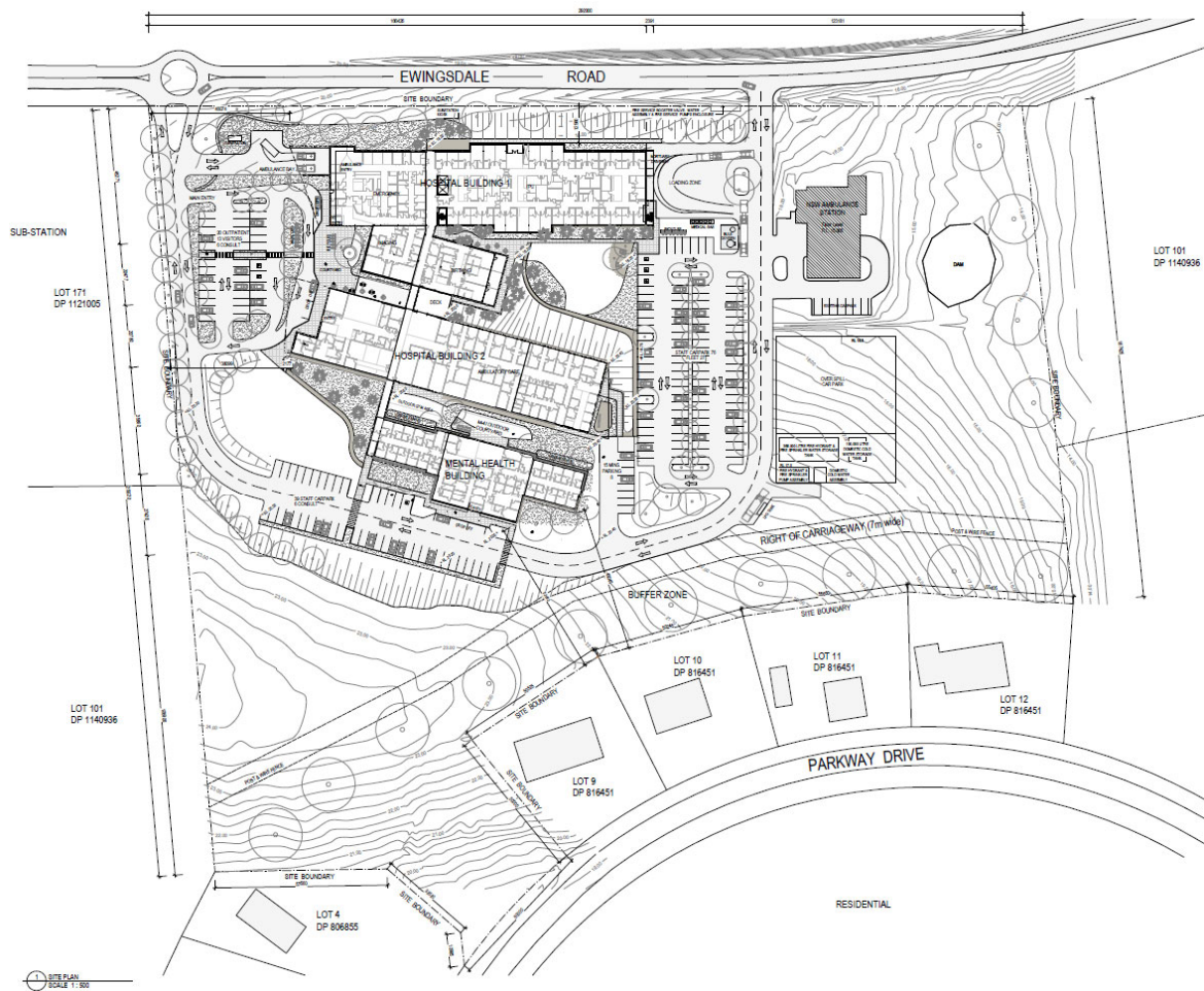
To create a hospital with reverence to Byron's rural context, providing patient wellbeing through creating a protective built environment connected to nature.

02 The Site

02.01 Site Planning

This unique site is located on Ewingsdale Road in a rural area, situated just east of the main freeway. The architectural approach to the design, planning and overall methodology, draws on Byron's rural setting and connection with place and nature, as a concept. Working with the sites natural contours, the building footprint connects gently with the landscape and takes advantage of solar access and aspect enhancing the patient experience and offering views and privacy where required.

The site boundaries are Ewingsdale road to the north, an existing power station to the West, a neighbouring paddock to the East, and a residential zone to the south.



Views of Existing Site



View of the Existing Ambulance Facility



View of the neighbouring Substation to the West

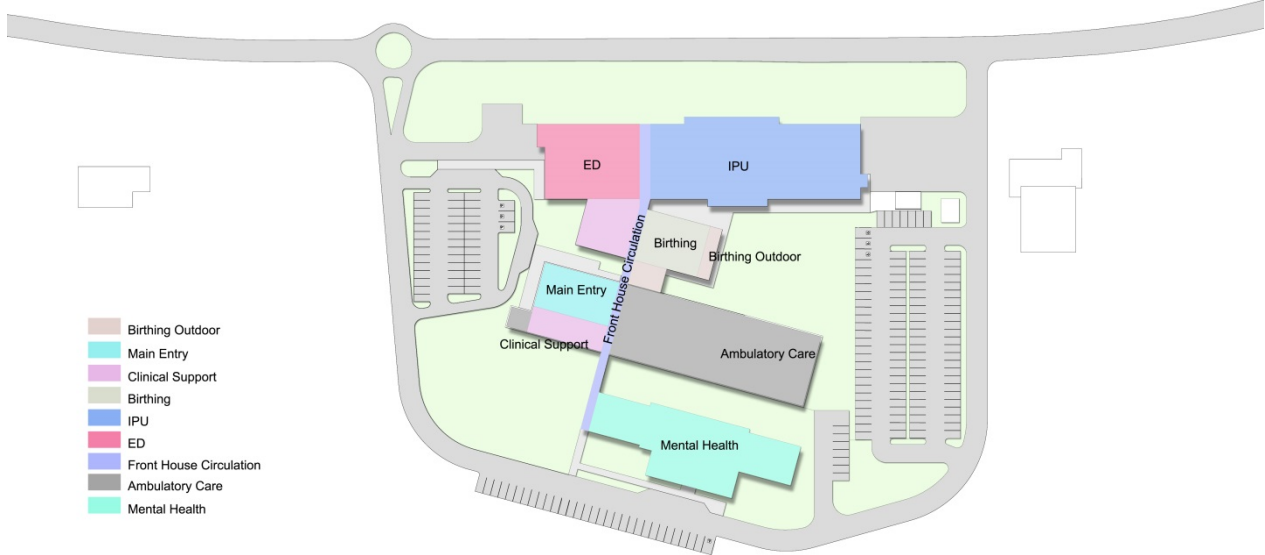


View on the residence on the Southern boundary



View of the tree lined Northern boundary

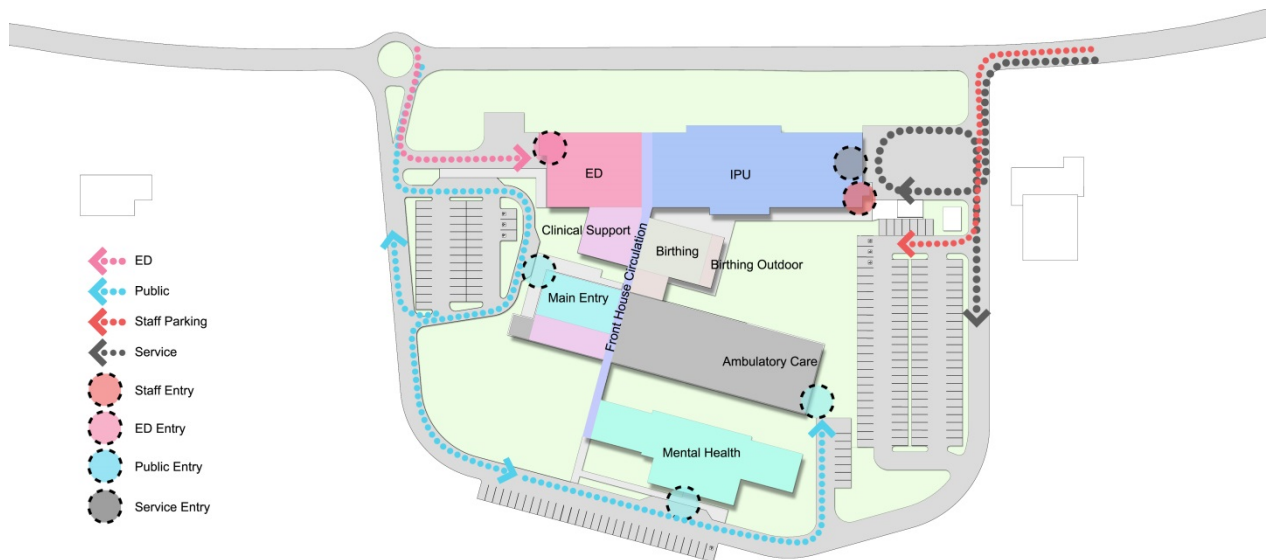
Clinical Planning Zones:



02.02 Site Access and Egress

Access to the site is currently from Ewingsdale Road to the Existing Ambulance Facility. Additional access is provided via a main entry and exit point at the northwest of the site, addressing the major traffic route from the Pacific Highway, also to the north west of the site. A continuous loop road allows staff and service vehicles to continue around the site and access the car park and loading zones on the east side of the site. The loop road connects the existing ambulance station road with the proposed hospital infrastructure and allows a secondary entry and exit point at this location.

- Generous drop-off space will be provided with under cover access to the building entry for arrivals, plus the inclusion of a number of seating options for comfortable waiting.
- New signature trees within the street and drop-off space reference the existing cultural trees and clearly identify drop off facility for those arriving by car and on foot.
- Ewingsdale road is proposed to be made wider for additional traffic with public transport links and dual carriage roadways under current investigation.



02.03 Landscaping

The proposed landscape aims to respond to the key objectives of the Functional Brief and give appropriate consideration to the existing site conditions and proposed clinical facilities, especially where it can be attributed to the holistic care and consideration of patients and staff.

The landscape design hinges on creating a legible and inviting 'place', local in character and rural by nature. It will be strengthened by the following key landscape strategies and aspirations:

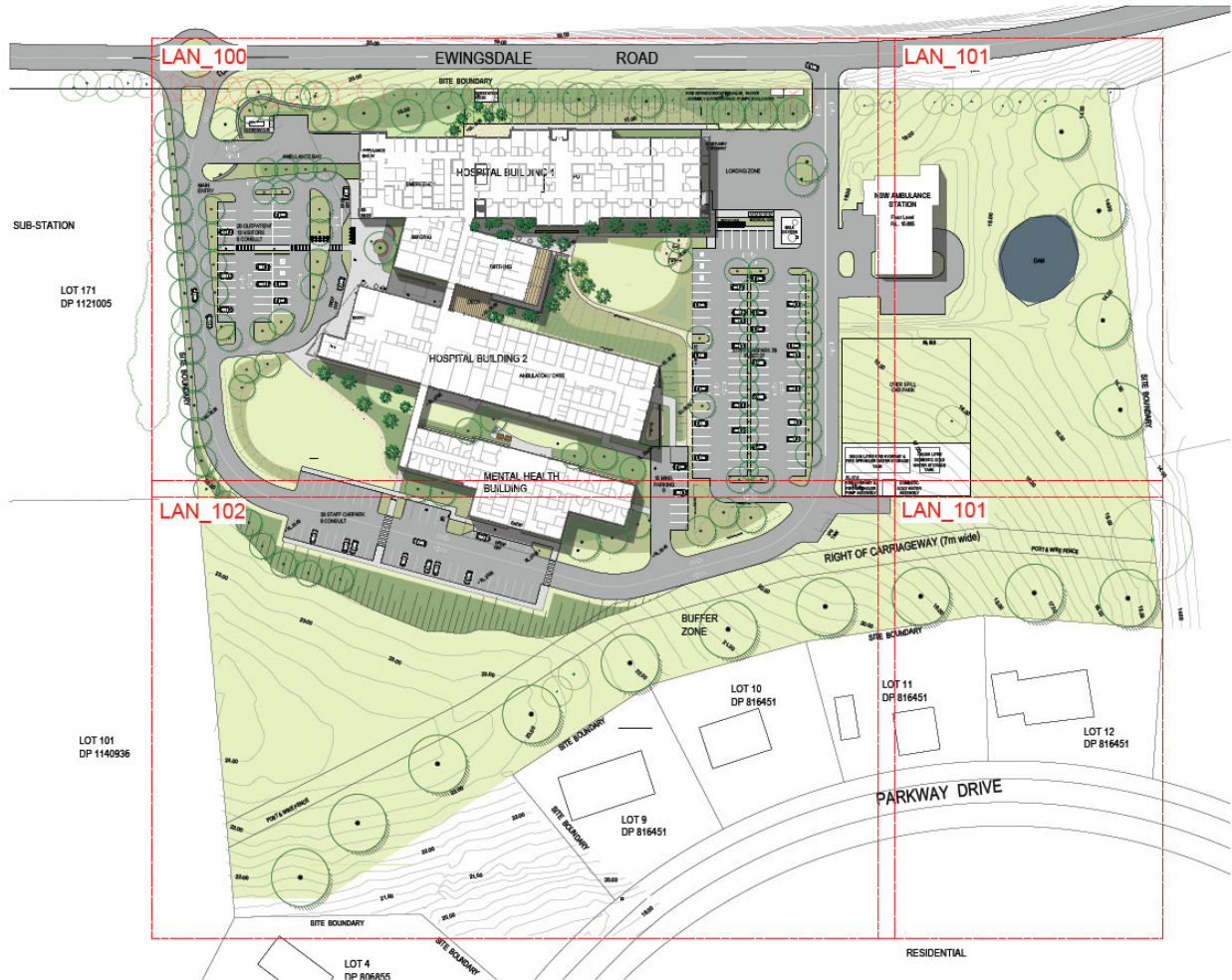
- Retention and creation of a rural landscape character specific to Byron Bay
- A fluidly integrated and rational way finding strategy for vehicles and pedestrians that is organised in a safe and accessible manner.
- Landscape design that utilises a simple but bold material palette, robust and easy to manage.
- A welcoming, warm and safe entry that acts as the 'front door' for the arrival of all patients and visitors. It aims to provide amenity and opportunity for congregation for all.
- Landscape acting as a key component in the restorative health and welfare of all patients
- A mix of accessible, social and therapy places that harness the power of healing and enrich the life of those who encounter it. This shall include a place that is culturally respectful and supportive of Aboriginal communities and customs.
- The selection and use of locally native plant species that are predominately bushfire retardant and assist in creating an identity for a coastal hospital.

The organisation of the landscape will complement the building, accentuating the sense of arrival, settling the building mass, highlighting landscape vistas through the core of the building and from many moments within its interior. The entry will be a welcoming cool, calm and simple space that breaks the scale of the building through well considered placement of social seating, trees and lush tropical planting. It will offer a place to rest at the entry and provide distinct separation between the building and car park. A playful but simple open space can be found at the edge of the main entry that will cater for more active use.

Within the building, a hospital street defines internal access and links too a number of healing gardens and open spaces for staff and patients. The healing gardens use the surrounding buildings scale, privacy planting and obvious vantage points to create well-positioned places that receive sunlight throughout the year. The locality of each garden ensures connectivity and promotes a constant source of sensory stimulation.

Each key landscape space is defined and drawn with direct relationship to the functional brief and a connection to the sites relationship with an existing landscape character, rural location and connection to people. This has been crucial in determining and conceptualising the overall landscape strategy.

Landscape Site Plan



Materials:

All materials used externally will be robust and durable. Hardscape surfaces in high traffic areas in the public domain will be a simple grey concrete, finished to slightly expose the richness of the aggregate. Seating elements will be simple and comfortable with signature timber benches added at the front door for warmth. Granite gravel will be used to slow the flow of water from landscape batters and as design element to create separation between planted areas and open space.

Planting Palette:

- New trees and understory planting will be introduced and will build upon the indigenous and tropical planting character of the site and surrounding context.
- Trees and planting will be positioned to create shade, strengthen the way finding queues, focus important views, provide adequate privacy and screening and highlight open space.
- The design will retain existing trees where possible.
- A mix of locally native, low maintenance and bushfire retardant species will be used. Predominately the species list will be derived from the approved local council schedule.

Planting Palette Images:

1. Marker Trees



Character Image



Araucaria cunninghamii



Melaleuca leucadendron



Eucalyptus signata



Ficus macrophylla

2. Planting Type 1



Character Image



Archontophoenix cunninghamiana



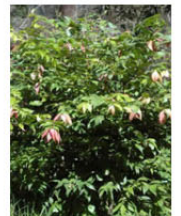
Alocasia and Molineria



Cordyline stricta



Randia fitzalanii



Syzygium 'Cascade'

3. Planting Type 2



Character Image



Crinum and Lomandra



Hibbertia scandens



Astromyrtus dulcis

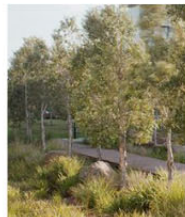


Acrostichum speciosum



Asplenium nidus

4. Planting Type 3



Character Image



Tristanopsis laurina



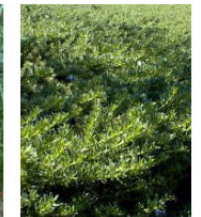
Acacia cognata 'nana'



Agnois flexuosa nana



Lomandra longifolia



Myoporum parvifolium

5. Planting Type 4



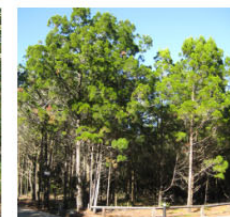
Character Image



Archontophoenix cunninghamiana



Melaleuca quinquenervia



Callitris columellaris



Elaeocarpus eumundii



Gahnia sieberiana

03 The Built Form

03.01 Facility Planning

The design of the new Byron Shire Central Hospital (BSCH) primarily consists of three wings; a Northern wing, Central wing and a Southern wing with a central circulation spine connecting all three wings along the North-South axis.

The main approach to the hospital is from Ewingsdale Road to the North of the site. The Main Entry and entry to the Emergency Department (ED) are located to the west of the Central and Northern wings respectively, providing good visual access from Ewingsdale Road. Back of House support areas including the Loading Dock and Mortuary is located to the East of the Northern wing with good visual screening from Ewingsdale Road.

Public access to the Hospital's main entry is located on the West of the Central wing. Patient and visitors can easily access all of the Hospital's clinical services via the central connecting spine.

Each wing consists of a distinct separation of functional areas. The Northern wing separates Acute Services including the Emergency Department (ED) and the Inpatient Unit (IPU) from Ambulatory and Community Care services located in the Central wing. The ED and IPU are collocated in the same wing, with both operating on a 24 hours/ 7 days a week basis. The Northern wing includes a subsidiary wing to the South accommodating Medical Imaging directly adjacent to ED and with ready access from the IPU. The Maternity Unit is located to the south of the IPU as a separate entity in response to its unique model of care, accommodating low risk midwifery led birthing. Additionally the Northern wing separates patient areas contained at Ground Floor from staff support and back of house functions located at the Lower Ground Floor. The separation of patient and visitor functions from support areas over two floors takes advantage of the natural fall of the site's topography.

The Central wing accommodates Main Entry, Pharmacy and Medical Records with Ambulatory and Community Health functional areas to the East of the central connection spine. Ambulatory and Community Health services generally operate Monday to Friday from 8am to 5pm.

The Southern wing accommodates the Mental Health Non-Acute Inpatient Unit. This wing has a dedicated and discrete entry, and appropriate landscaping to provide additional visual privacy screening.

03.02 Built Form

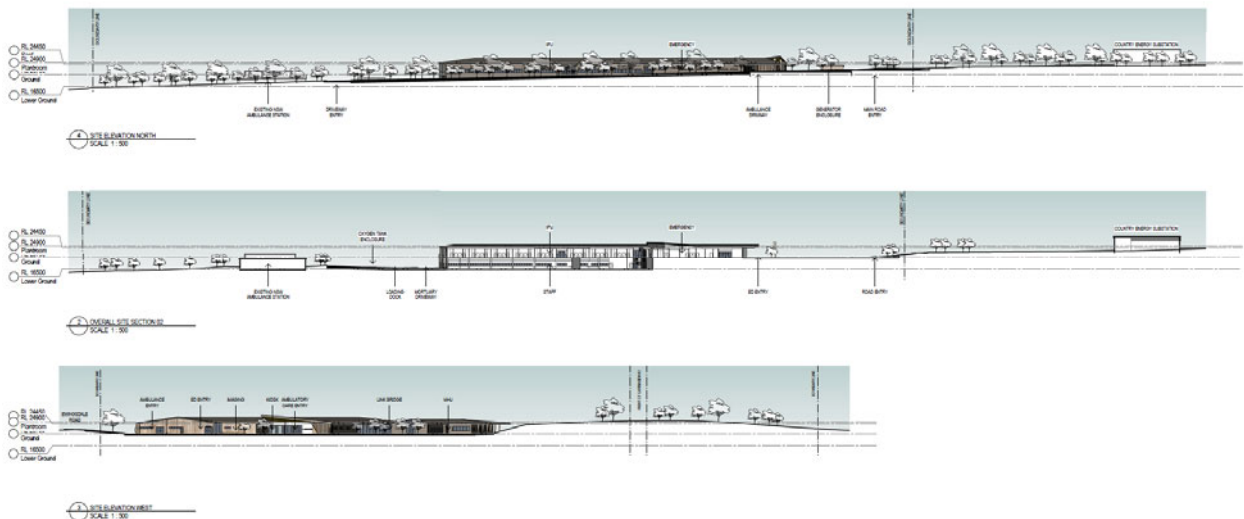
The building form and scale is fitting of its location with the majority of the development being single storey in height. There are 3 main wings orientated in the east/ west direction, creating long Northern facades. The main building block to the north end of the site adjacent to Ewingsdale road, is partially 2 storey in height and is approx 11m above the natural ground plane on its eastern end.

Area Table

- Site Area: 60,000m²
- GFA: 9,316m²
- Proposed Roads & Carpark: 11,141m²
- Proposed Hard Paving: 2010m²
- Proposed Plant Area (External): 600m²

Setbacks from:

- Northern Boundary – 12.58m
- Western Boundary – 38.1 m
- Eastern Boundary – 123.2 m
- Southern Boundary (from Lot 10 DP816451) – 48.04m



03.03 Materiality

The proposal for the new facility is to use materials that are fit for purpose and will provide cost effective solutions for the various requirements.

The palette is drawn from the indigenous nature and the surrounding local environment. The material decisions are conceived as a direct response to the practical need and context of the facility. The need for openings and windows are directly related to clinical needs and planning responses. Given the location of the facility and local rural context, we have endeavored to include a reference to the historical building materials and local industry.



Perspective of site



View of eastern façade



View of ambulance entry



View of main entry

03.04 Car Parking

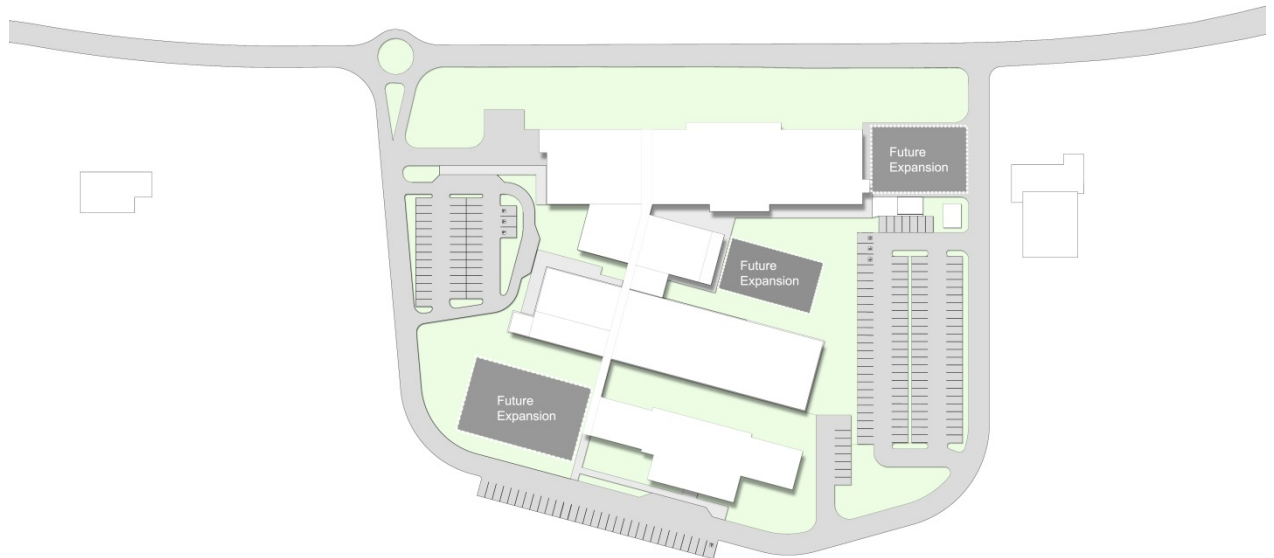
A total number of carparks located throughout the site is 195. This reflects the estimated parking demand of the BSCH outlined in Transport and Accessibility report prepared by Taylor Thomson Whitting on the 31th July 2014. The breakdown is as follows:

- Staff Car Park = 115
 - o Main Car Park = 76
 - o Southern Car Park (Ambulatory Care and MHU) = 39
- Outpatient = 20
- Visitors = 13
- Consulting = 20
 - o Main Entry Car Park = 6
 - o Southern Car Park (Ambulatory Care and MHU) = 6
 - o 15 Min Parking (Chemo Unit) = 8
- Fleet Car Parks = 27
- Accessible parks (enclusive in totals) = 6

To encourage alternative transport options both the 2010 and draft 2014 Council DCP's require the provision of bicycle parking. There is proposed 28 bicycle parks.

03.05 Expansion Strategy

The BSCH campus has been designed with future flexibility. The 4 wings can be elongated to with grow the demands of the hospital when required easily fitting within the layout of the site.



03.06 Solar Access

Due to nature of the green field site and the lack of neighbouring building in a close proximity there is no overshadowing of adjoining buildings.

The East/ West orientation of the 3 wings ensure optimal solar access to each facility.



03.07 Crime Prevention Strategy

The safety and security of BSCH staff, patients and visitors is of the highest priority and has been integrated into the planning and design of the new facilities. The facilities will comply with the NSW Health DS36 – Safety and Security Guideline 'Protecting People and Property – NSW Health policy and Guidelines for Security Risk Management in Health Facilities,' NSW Health Facility Guideline – Part C and other OHS documentation.

The principles of Crime Prevention through Environmental Design (CPTED) when applied to the design of the built environment is intended to:

- maximise risk to offenders by increasing the likelihood of detection, challenge and apprehension;
- maximise the effort required to commit crime by increasing the time, energy and resources required to commit crime;
- minimise the actual and perceived benefits of crime by removing, minimising or concealing crime attractors and rewards; and
- minimise excuse making opportunities by removing conditions that encourage/facilitate rationalisation of inappropriate behaviour.

The proposed BSCH has been assessed against the four principles which assist in minimising the opportunity for crime, these are:

- Surveillance;
- Access control;
- Territorial reinforcement, and
- Space management.