

MASTER-PLAN - COMPLEMENTARY DEVELOPMENT

The site master-plan has been planned to accommodate future complementary program, including;

- Private medical consulting rooms
- Health and Social Services
- Research, Training and Education (expansion of the Health Hub)
- Allied Residential Accommodation e.g. Carers Accommodation

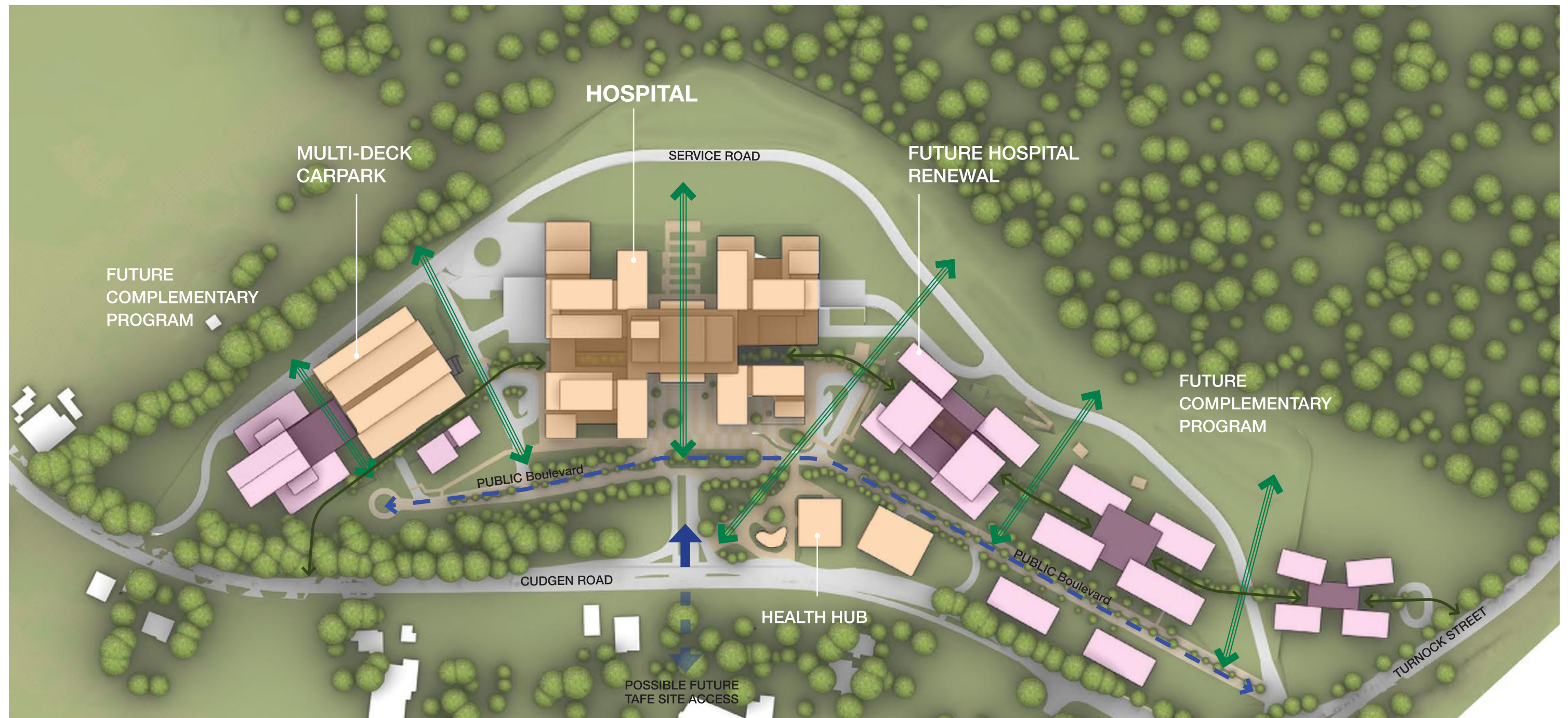
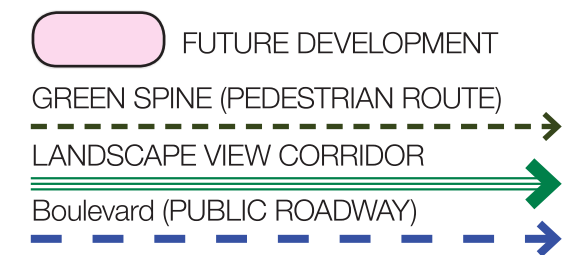


Figure 77. Site Plan - Master-plan, Future Complementary Development (Artists Impression)

4.0 BUILT FORM & URBAN DESIGN / 4.13 MASTER-PLAN, FUTURE EXPANSION & DEVELOPMENT

The complementary program has been arranged conceptually to complement neighbouring land uses. Co-location of like building functions has been considered, for example; Adding a new TAFE site entrance off the new hospital main entrance intersection, providing direct physical access links between campus Research, Training and Education functions and the Kingscliff TAFE. Further, residential functions will be located to the east of the site, compatible with the Kingscliff Hill residential precinct, as identified in the Draft Kingscliff Locality Plan.

The site ordering principles, allow for extensive future expansion to the east and west flanks of the hospital, with the Boulevard and Green Spine capable of extending. Future buildings will take advantage of the street interface with Cudgen Road or alternatively located along the ridge, accommodate lower ground floor levels, serviced off the North Service Road. Structural grid and consequent building orientation will follow the ridge orientation specific to its position.

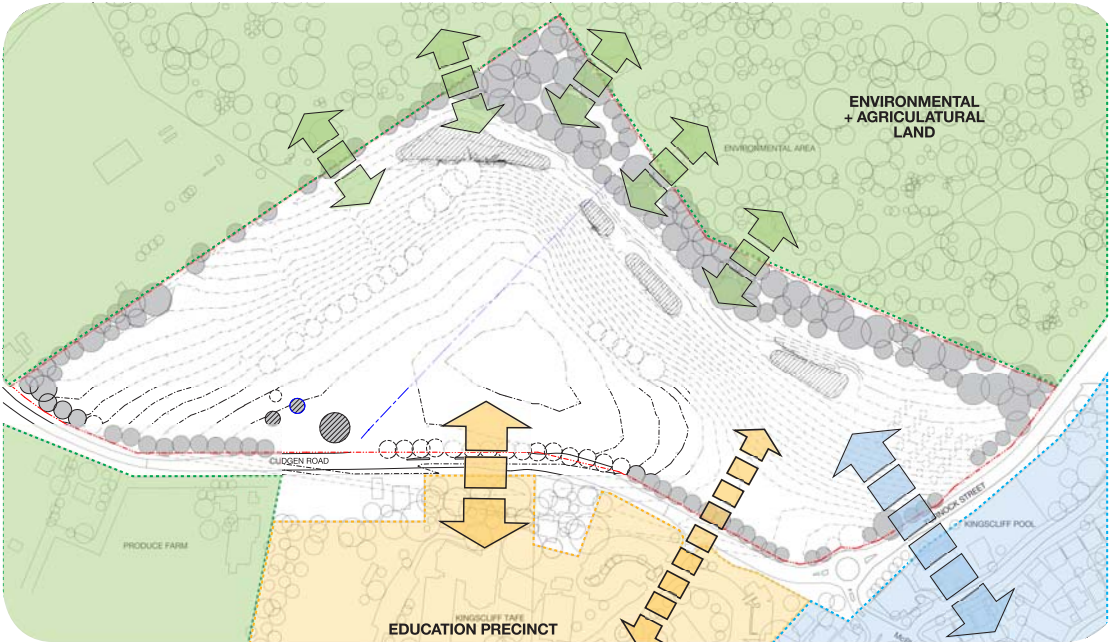
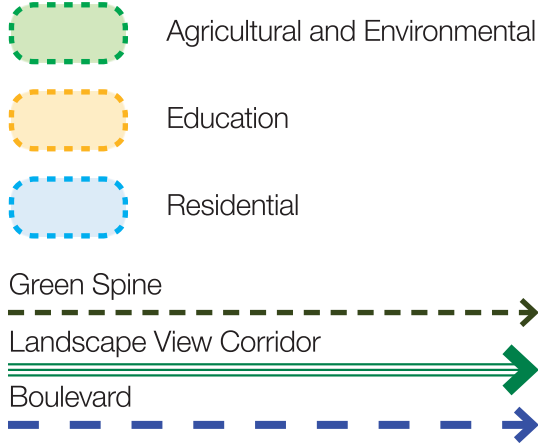


Figure 78. Site Plan - Master-plan, Neighbour Uses Interface



Figure 79. Site Plan - Master-plan, Future Complementary Development (Artists Impression)



Figure 80. Site Plan - Master-plan, Future Complementary Development (Artists Impression)

4.14 SERVICES INTEGRATION

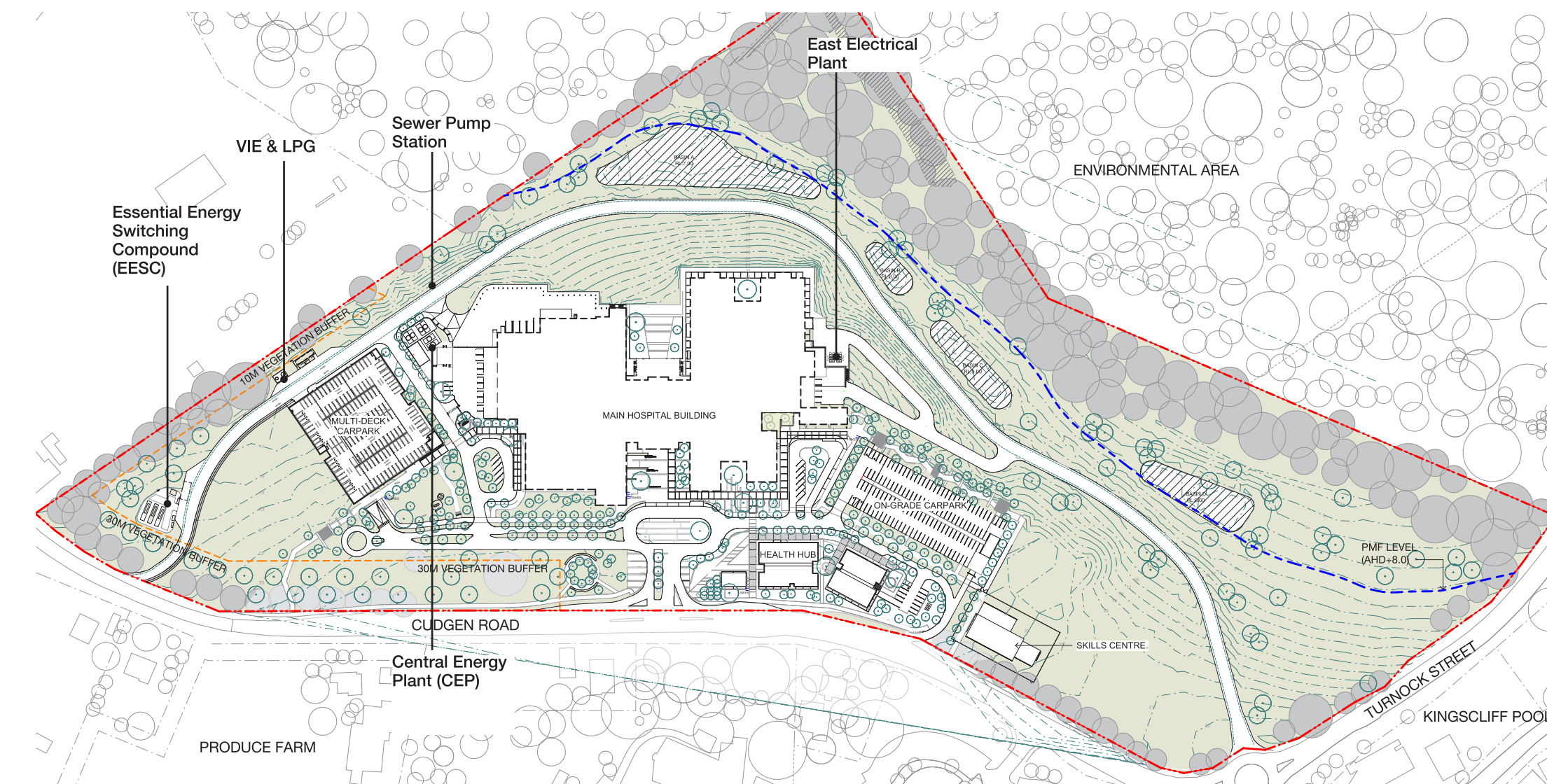


Figure 81. Site Plan - Services Infrastructure

SERVICES INFRASTRUCTURE

Site services infrastructure includes an incoming switching station (ISS), located near the service entry off Cudgen Road in the South-West corner of the site, a sewerage pumping station located on the north side of the internal ring road opposite the loading dock. Bulk oxygen storage (VIE) and underground bulk LPG storage are located adjacent a lay-by on the north side of the internal ring road.

Fire booster assembly and Fire Control Room are provided at service yard level within the main hospital building. Access and hard-stand immediately adjacent for fire appliances is provided in the service yard.

A Central Energy Plant (CEP) compound is provided at Service Yard level, immediately adjacent the western end of the basement. Contained in this compound are the chillers, cooling towers, condensers, kiosk sub-stations to serve the western part of the building, medical air and fire tanks and pumps. Adjacent, within the main hospital building and also at service yard level are the western main switch rooms and UPS together with cold water tanks, pumps and filtration plant.

The eastern kiosk substations are located externally at lower ground level, with UPS and switchboard located immediately inside.

High voltage (HV) electrical generators and the incoming electrical switching station are to be co-located on-grade in a consolidated Essential Energy Switching Compound located in the south west corner of the site. The compound is to be enclosed by a screen concealing views to the housed service infrastructure. The generator fuel supply tank and associated pump room is to be located beneath the adjacent service lay-by.

Domestic hot water, space heating hot water- and air-cooled condensers are located in the Level 6 rooftop plant room.

Air handling units are distributed throughout the building, including on-floor to serve Inpatient Units and in the Level 6 (roof top) plant room to serve the central shared support areas.

Campus distributor rooms, one of which is to incorporate the DAS, are located in opposite quadrants within the main hospital building, on levels 2 (North-West) and 3 (South-East). The Campus distributor room incorporates the building distributor.

Distributed plant to service the Health Hub is to be located within and immediately adjacent to the Health Hub buildings.

LOGISTICS STRATEGY

A dedicated entry point and connection to the internal ring road at the south-west provides separate site access for ambulances, staff, contractors, couriers, delivery & waste collection vehicles. The ring road provides direct access for these vehicles to the staff carpark, loading dock and contractor/courier setdown, allowing for separation from public, vehicular and pedestrian traffic.

Bulk oxygen and LPG deliveries access is accommodated via the same route, with a lay-by allowing for forward movement of these vehicles through the site, exiting at the Turnock Street roundabout, eliminating the need for turning around or reversing manoeuvres.

4.15 SUSTAINABILITY STRATEGIES

SUSTAINABILITY STRATEGIES

- Targeting equivalence with a 4-Star Greenstar pathway
- Reviewing opportunities to work with Australian Renewable Energy Agency (ARENA)
- A more holistic approach to sustainability, considering social, economic and environmental objectives. Master-planning for long term sustained healthcare services on site
- Review of whole life of building to reduce maintenance and extend use of the facility
- Passive design solutions where feasible, examples includes naturally ventilated fire escape stairs
- Considered window orientation, minimizing extents of direct south and west facing windows
- Specification of resilient finishes for longevity
- Maximise opportunities for off-site local pre-fabrication
- Energy and water efficient equipment, fittings, fixtures and appliances
- Rainwater re-use on site for non-potable purposes
- Consideration given to type and quality of materials (including low embodied energy and recycled content)
- Metering and monitoring
- Passive design strategies such as orientation, natural daylight access, external cladding, thermal mass, appropriate glazing selection, thermal efficiency and building fabric
- Waste management, reduction and recycling
- Opportunities for on-site renewable energy, ongoing review
- Efficient building management systems and equipment controls, including lighting and air-handling
- WSUD and storm-water management
- Sustainable Transport Plan
- Multi-Deck Carpark - reduced expanse of On-Grade site coverage, reducing heat island effect.
- Design provision to accommodate future electric vehicle parking/charging within Multi-Deck Carpark

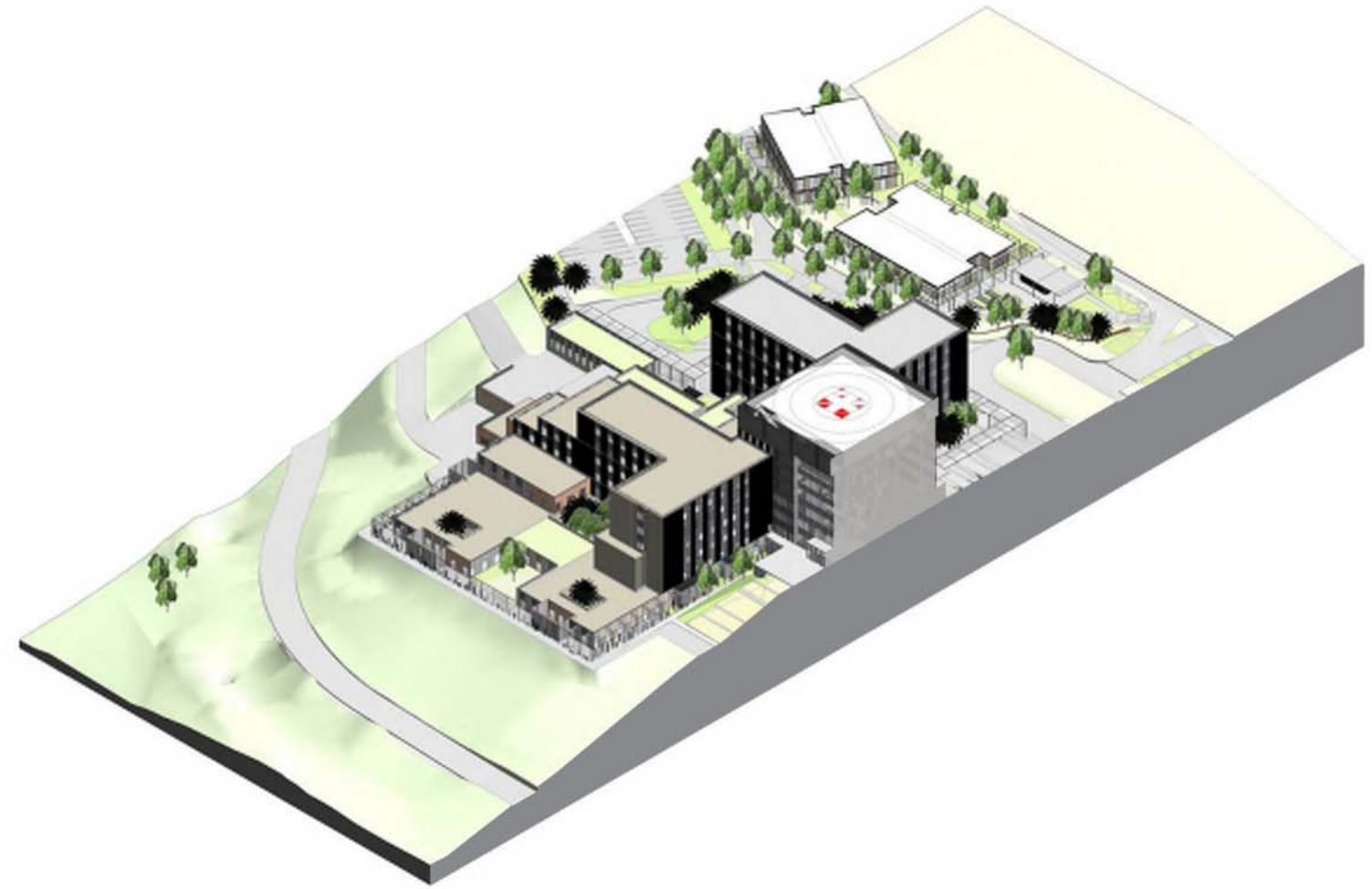
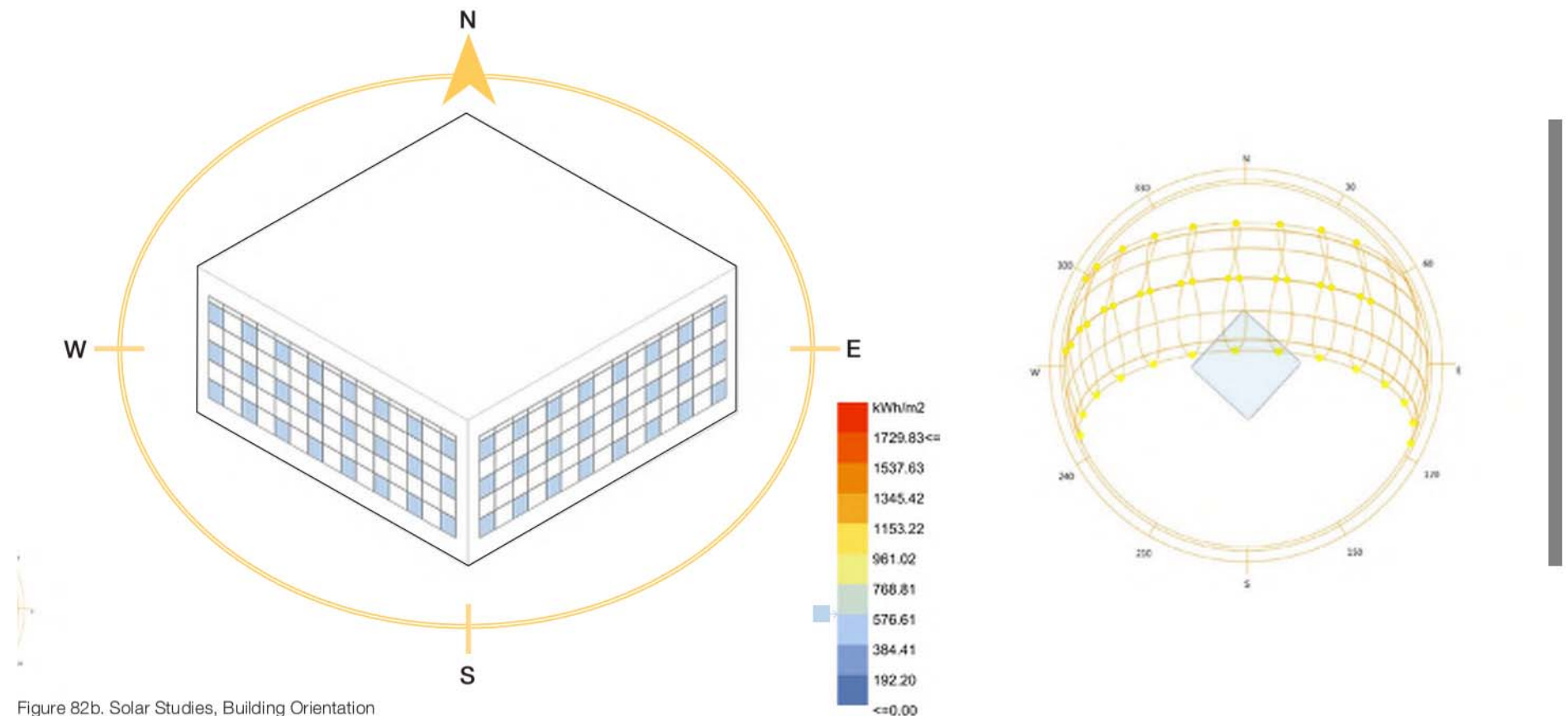
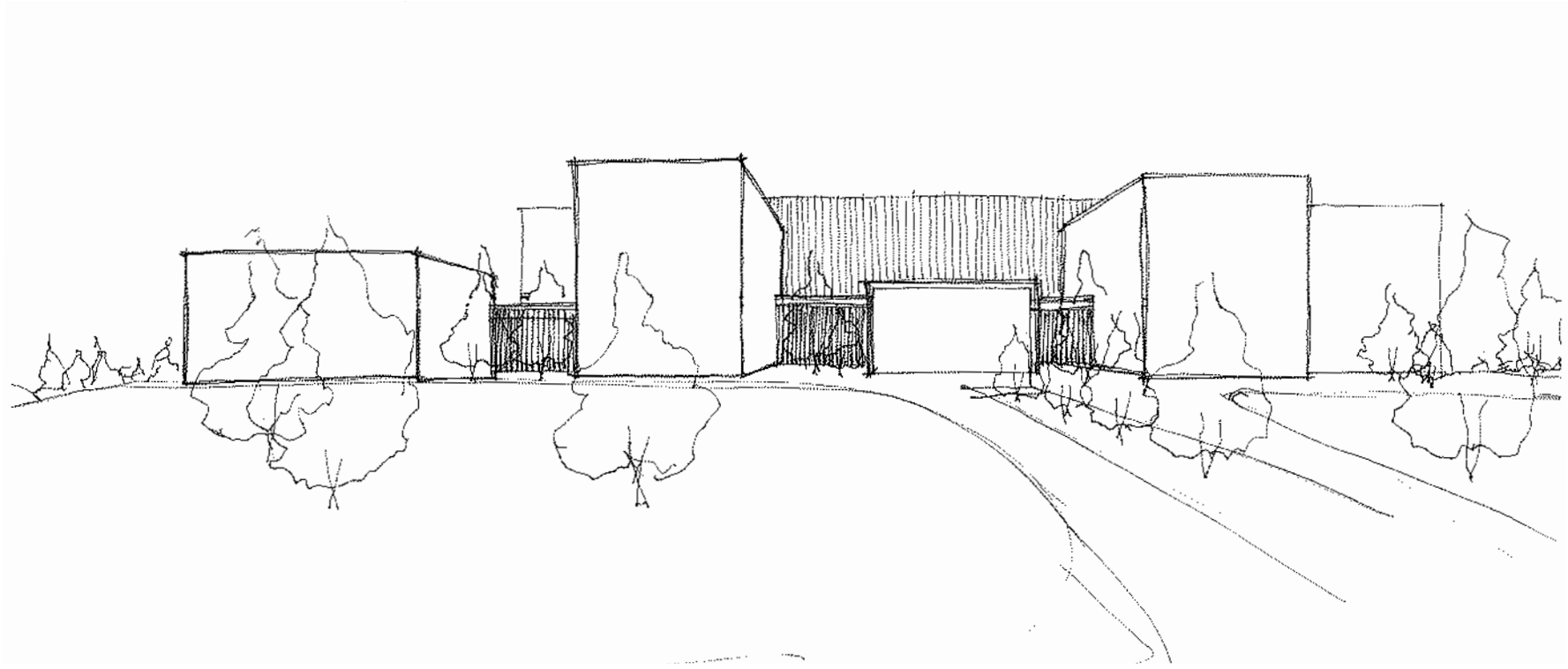


Figure 82a. Building Axonometric Section - Holistic Sustainability



4.16 CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

Tweed Valley Hospital has adopted the principles of CPTED in developing the site layout and building design to establish a safe and secure environment for the users and local community, through;



TERRITORIAL REINFORCEMENT

The hospital campus has been designed with a coherent public realm zone to the south of the hospital, segregated from logistics and staff zones which are located to the north of the hospital and interfacing the hospital at a lower level defined by the ridge. Hospital services are further segregated with provision of dedicated site entrance. Public entrance is clearly defined and signposted located immediately opposite the hospital building on Cudgen Road. Vehicle and pedestrian circulation routes are clearly defined and intuitive. The main public spaces are to be activated with the provision of food and beverage retail, including town centre on entrance, north civic café and terrace and future food and beverage retail integrated within the Multi-Deck Carpark.

Within the hospital building clear staff and public access is defined and reinforced, including provision of dedicated clinical lifts and connecting corridors.

PASSIVE & STRUCTURED SURVEILLANCE

Main public routes at ground level through the hospital have a direct relationship with the external environment. Clear view lines that pass through the main public foyer and street spaces connecting with outdoor gathering spaces providing passive surveillance. The key circulation axis terminates on the north terrace with a sun washed grassed slope embanked to meet the terrace is sheltered from the winter winds.

24 hour services have been aggregated to the west of the hospital including Multi-Deck staff and public Carpark. The concentrated activity base will ensure increased surveillance and security after hours. Site lighting will be provided as appropriate to ensure all users feel safe when parking and using the hospital services.

ACCESS CONTROL

The hospital has been designed as a series of functional neighbourhoods. These neighbourhoods each have dedicated access controlled interfaces with wider hospital. General public entrance is limited to three main entry points, being front door from the south and then either end of the hospital street, with access at lower ground level from the west and ground level from the east.

Access control devices will be fitted to key internal doors, which lead to secure and dedicated clinical/admin spaces and linkages within the building.

SPACE/ACTIVITY MANAGEMENT

A palette of resilient building finishes has been selected. The materials which are low maintenance and will maintain their high-quality finish. A perceivably well-maintained building reinforces a sense of ownership, pride and management over the space, which contributes to crime reduction.

The loading dock will be well observed from the engineering department which has clear line of sight over the logistics yard entrance and loading dock areas

The use of CCTV will be utilized to complement and maintain security in key public and logistics interface locations.

4.17 TWEED VALLEY SKILLS CENTRE

INTRODUCTION

The proposed Prototype Skills Centre will be a stand-alone temporary structure, supplementary to those described in the initial EIS concept application. It will comprise a single storey, modular building on temporary footings, incorporating an attached external deck area under the main roof structure, accessed via pedestrian steps and accessible ramp.

Construction is proposed to be undertaken partially or completely off-site, the structure dismantled, transported to the site then reassembled towards the eastern end of the hospital site, set back 15m from the Cudgen Road frontage. A pedestrian path will link the facility with the existing pedestrian path along Cudgen Road.

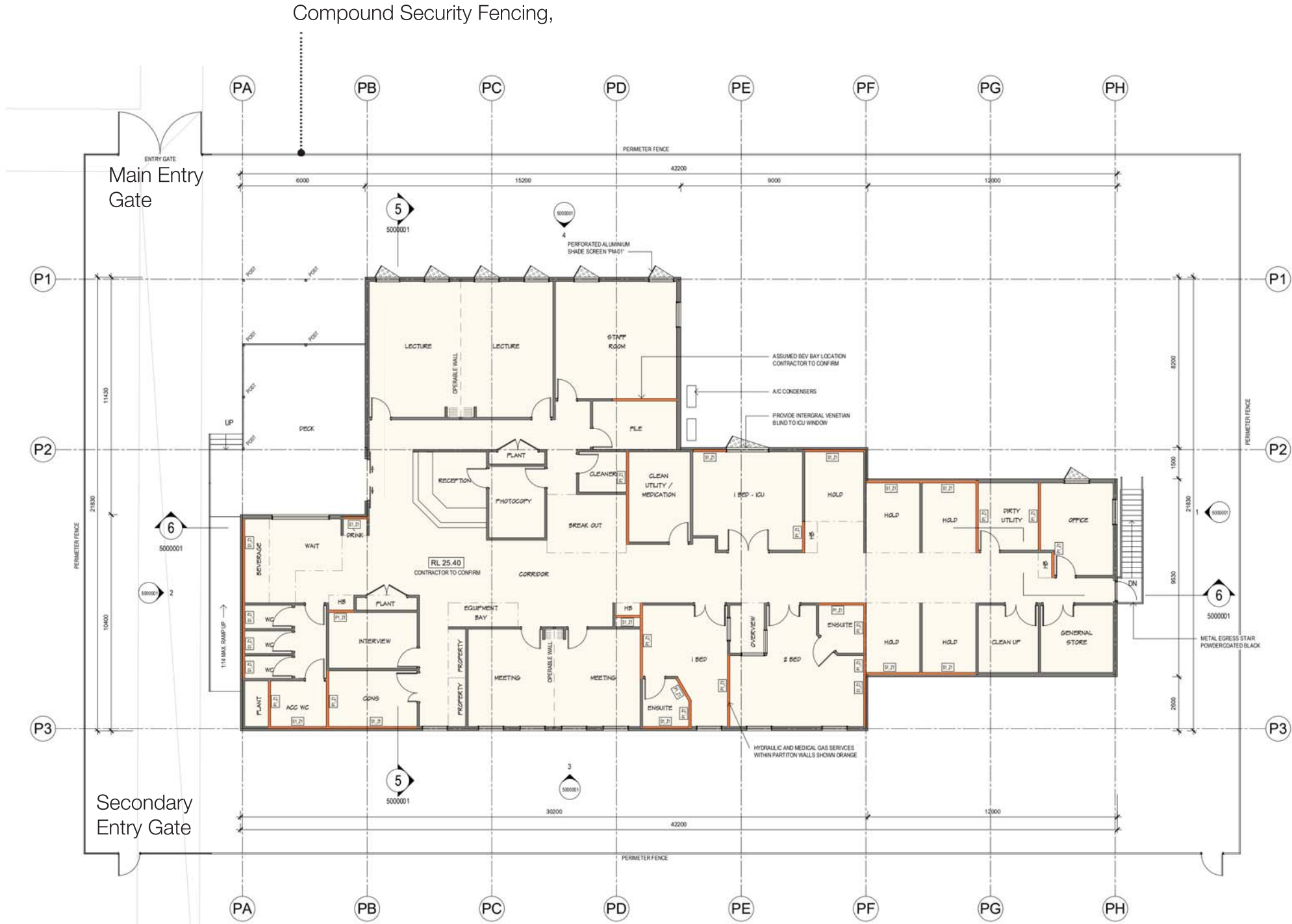
FACADE

The pre-fabricated building elements will be primarily lightweight structural elements on a chassis suitable for transport and site re-assembly. The external cladding will comprise a mixture of colorbond metal sheeting, painted CFC sheet and powdercoated aluminium screening elements, with a colorbond sheet roof. Glazing extent, sill heights and widths are to be proportionate to the main hospital building and aligned with Health Infrastructure benchmarks.

USE, AND FUTURE RE-PURPOSE

It is proposed that during construction of the Main Hospital, the Prototype Skills Centre will be used for assessment of generic room type and training activities, and prior to commissioning of the main hospital building, be disassembled and relocated to the Kingscliff TAFE campus, where it will remain as a valuable training facility into the future.

The internal spaces are to include reception, admin and wait areas with beverage bay and amenities, clinical spaces including various bedroom types, consultation room, clean utility/medication and support spaces including meeting and staff rooms, interview, lecture and break out space, with ancillary spaces such as cleaner's room, stores, hand-wash bays and plant.



JUSTIFICATION

The Prototype Skills Centre will comprise a series of interior spaces accommodating various functions for both the short term assessment of prototype rooms and spaces for education and training, together with associated support areas.

Construction of full scale prototype rooms is essential for assessing the suitability of generic room types proposed for the main hospital. They allow staff, consumers, carers, students and community members the opportunity to visualize how the various spaces will function, provide a platform for training, workforce and service planning.

They provide opportunities for testing of models of care, training and education, staff induction and emergency response simulations in various environments identical those proposed for the hospital.

The prototyping process also assists in the identification of functional briefing and design issues and allows adjustments to be made before generic room types are rolled out through the hospital.

Locating the prototype rooms on the hospital site, as opposed to at the existing hospital or elsewhere, provides context for end users while making the facility more accessible to the community the hospital will ultimately serve.

Its close proximity to the Kingscliff TAFE campus will allow staff and students ready access to the facility during construction of the hospital for education, training and simulation activities. It will allow the opportunity for TAFE stakeholders to become familiar with the layout and function of the facility prior to its ultimate relocation to the TAFE campus.

It is expected the Prototype Skills Centre will be in constant use throughout construction of the hospital and relocation to TAFE will occur at a suitable time prior to completion.

EXTERNAL MATERIAL LEGEND

GL-01

LP-01

LP-02

MR-01

PM-01

PA-01

PC-01

GREY TINTED GLAZING

LOW PROFILE METAL CLADDING - COLORBOND 'COVE'

LOW PROFILE METAL CLADDING - COLORBOND 'JASPER'

METAL ROOF - COLORBOND 'BASALT'

PREFORATED ALUMINIUM SHADE SCREEN, COLORBOND 'MONUMENT'

PAINTED CFC SHEET, DULUX 'HOT BRISTLE HALF'

POWDERCOATED - COLORBOND 'MONUMENT' TO WINDOW FRAME, DOOR FRAME

COLORBOND 'MONUMENT' (PAINT TO MATCH) TO POST & BALUSTRADES

DECK & SUB-FLOOR FRAMING

FRAMING MEMBERS INCL. POSTS & SUB-FLOOR BRACING - COLORBOND 'MONUMENT' or PAINT TO MATCH.

DECKING

- TIMBER WITH CLEAR COAT or,
- COMPOSITE DECKING COLOUR TO MATCH COLORBOND 'BASALT' or,
- DECKING PAINT - DULUX 'MALAY GREY'

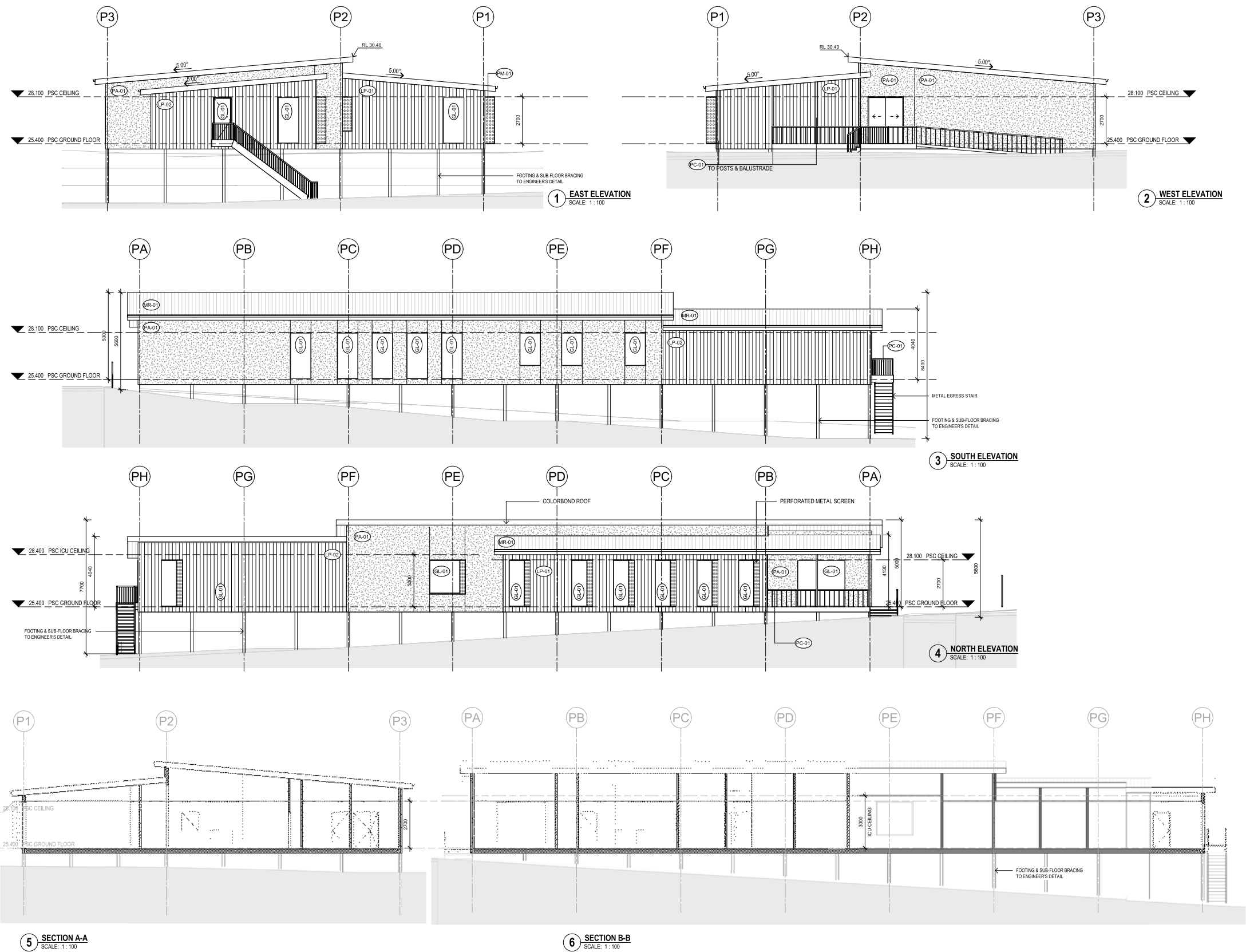
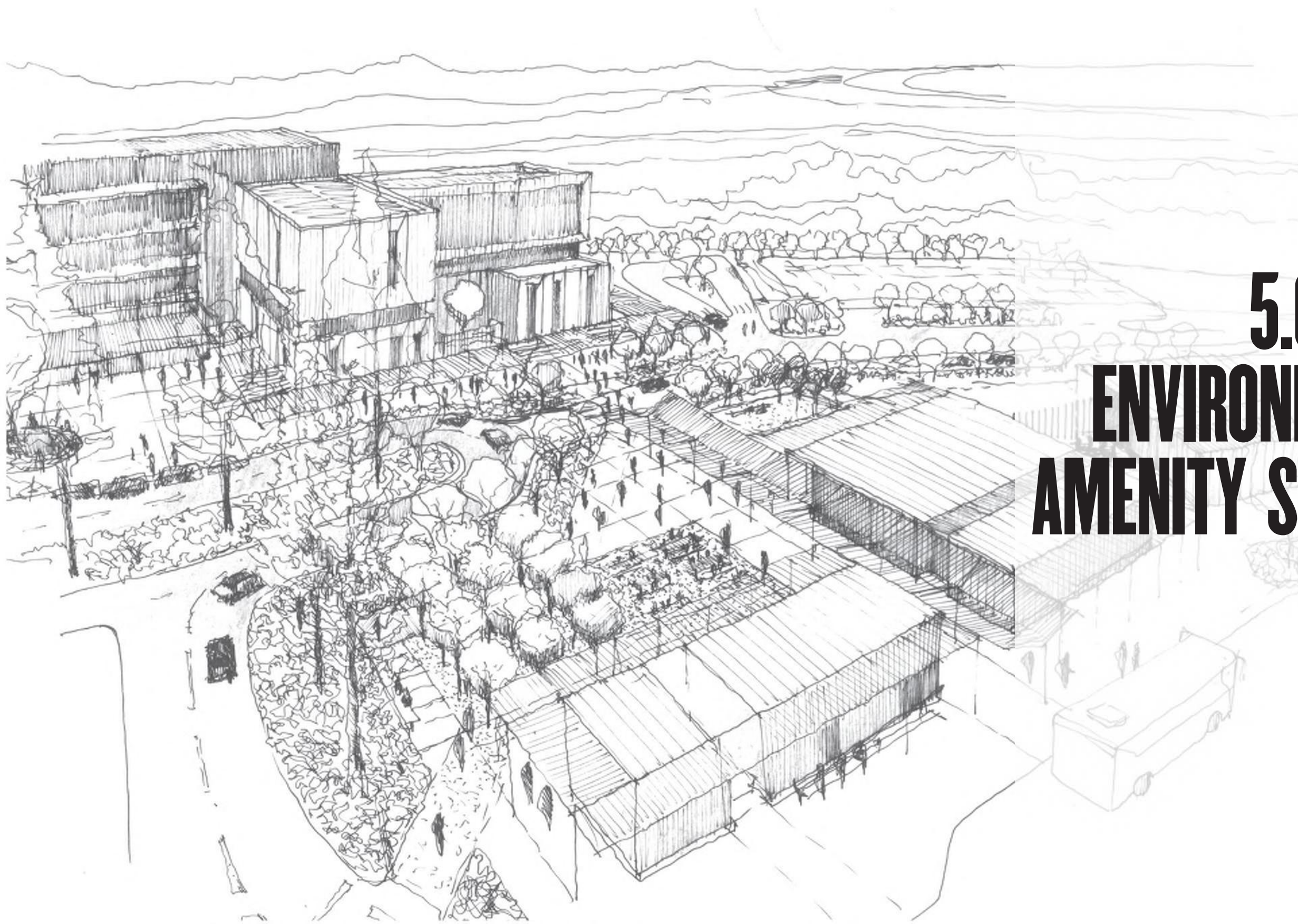


Figure 84. Building Elevations & Sections, Tweed Valley Skills Centre



5.0
ENVIRONMENTAL
AMENITY STATEMENT

5.1 INTERIOR DESIGN PRINCIPLES



CONNECTED WITH PLACE - MATERIALITY

Utilizing a strong sense of materiality to connect the building more intimately to the immediate context of the Cudgen Plateau. From the ancient Hoop Pine forests which stood on this land to the red earth and distinctive coloured clays which sit beneath it.

CONNECTION WITH COMMUNITY

Creating public spaces which are opportunities for the community to activate, creating place and meaning for generations to come.



CONNECTION AND KINDNESS

Placing a greater importance on nature to assist in normalizing the hospital experience and reducing the institutional and inhuman qualities often associated with these spaces. We like to refer to this as kind space, space which is designed with care and relates more intimately to base human desires and needs.

85a, b, c, d & e. Design Reference Image



CONNECTED WITH NATURE

Healthcare settings that are designed in partnership with nature are proven to ground visitors and patients, improving well-being and reducing the stigma of disease, focusing on the possibilities of healing

INTERIOR MATERIALITY MASTER PALETTE

INTERIOR MASTER PALETTE

A careful selection of materials has been made that further reinforces the connection this hospital has with the Cudgen area and specifically the land on which the hospital will be built.

Material selection will be selected using rigorous protocols to ensure the most sustainable, maintainable and fit for purpose selections.



Figure 86. Interiors Master Material Palette - Preliminary

5.2 FRONT OF HOUSE

Key Interior Design Principles:

- / Establish clear and direct relationship with the natural environment*
- / Utilise the proven benefits of nature on the well-being of patients, carers and staff of the hospital.*
- / Draw inspiration from the local natural context to support the feeling of connectivity to the local community.*
- / Establish an interior architectural language that stitches local farming context through built form and materiality*
- / The village building typology has been developed around the concept of safety and socialisation*

CULTURAL SIGNIFICANCE

The Cudgen Plateau holds significant meaning to the local indigenous community through its status as a creation site for the Ngarabul and Githabul people. The Boodhareem Gawari or song-line describes the story of a warrior hunting and spearing a Guruman, and the path the injured animal took to find a place of refuge and safety within the local Hoop Pine forests found in the ranges. The colour of the earth “Goodgin” (Cudgen) turned red when mixed with the animal’s blood and has been embedded forever into the location. We see the Tweed Valley Hospital as an extension of this idea, a place of refuge intrinsically linked to the earth and the people in which it resides.

CONNECTIVITY

The master-plan of the site and the major circulation networks internally are defined by a series of major and minor pathways. Establishing these pathways is one of the key organising principles of the hospital. An East/ West link that connects the Multi-Deck Carpark and the ambulatory Carpark and a North/South link which connects the main drop-off and plaza which defines the main entry to the public outdoor terrace overlooking the environmental reserve beyond.

The point at which these two paths intersect becomes the major decision point from which to orientate oneself to all parts of the hospital. This central lobby space allows clear and easy access to vertical circulation throughout the building by way of two clearly defined and highly visible public lift cores. Adjacent to these lift cores are positioned two key open stairs giving access to lower ground level and level 01 on the east

The pathway from the east is enhanced and energised by the introduction of a 25m external courtyard which runs parallel to the direction of travel and further reinforces the pathway and its conceptual connection to the land, nature and safety. This relationship between nature and way-finding is a key feature of the design, allowing for an intuitive reading of one’s position in space which will assist in reducing levels of stress for all occupants of the building.



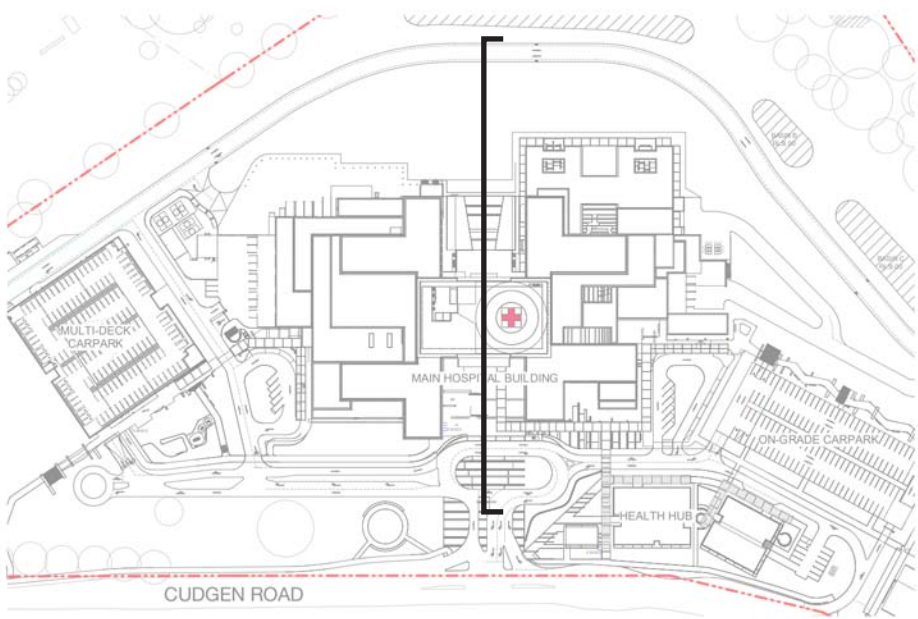
Figure 87a, b & c. Design Reference Image

The food & beverage retail zone is situated towards the northern half of the main lobby with direct access to a large public terrace overlooking the environmental area.

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- Public Space
- Public Amenity
- Support Services

MAIN ENTRANCE
CELEBRATED CIVIC
SPACE



Key Plan

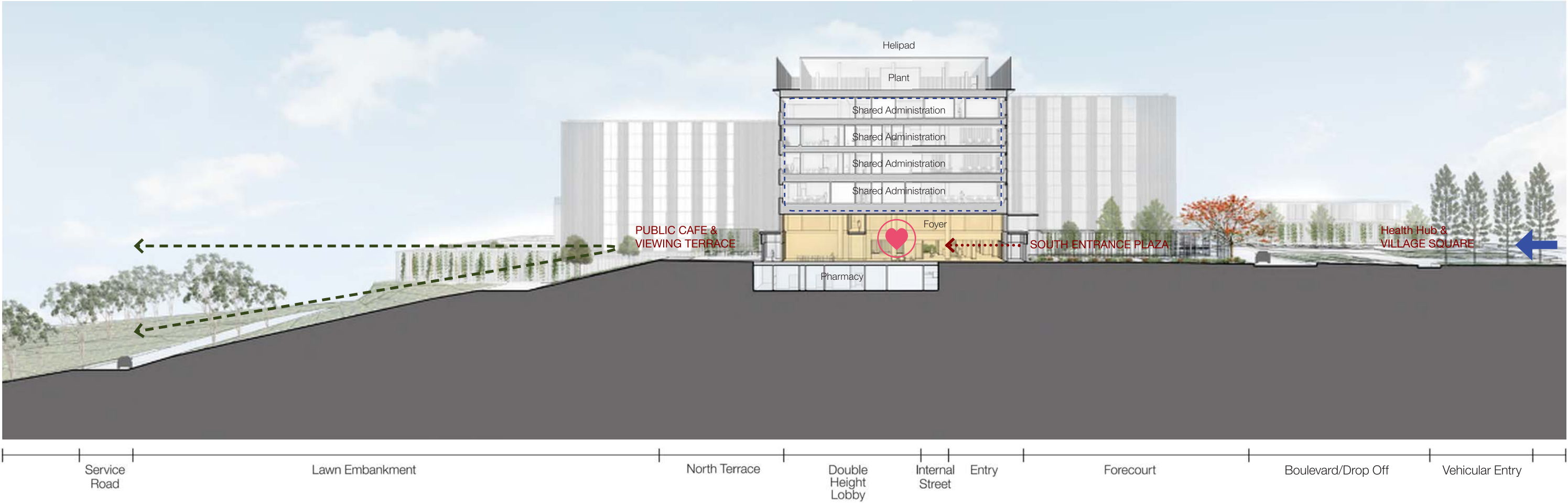
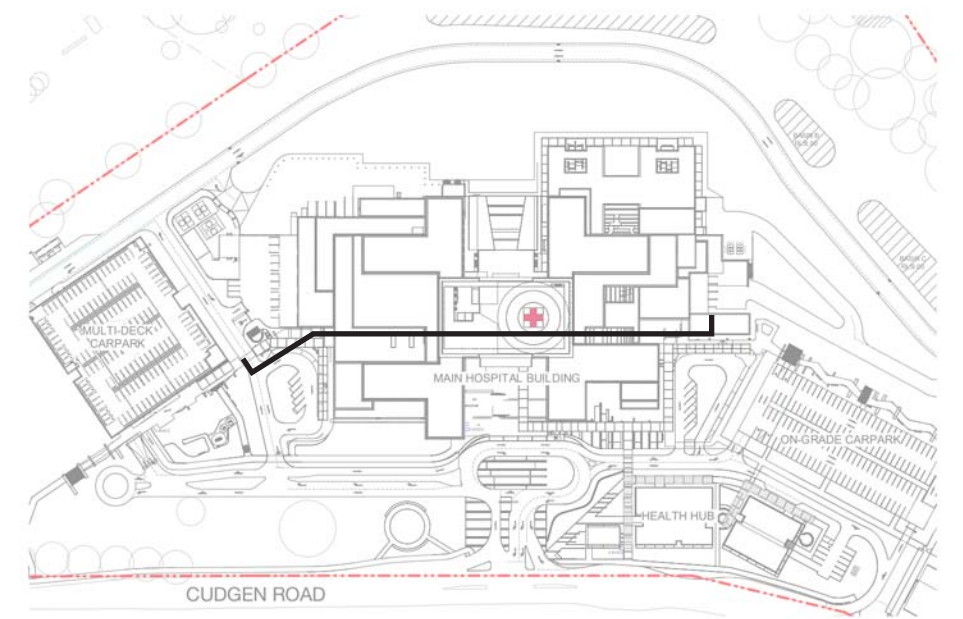


Figure 90. Design Section - Main Entrance Foyer, Civic Axis

SECONDARY PUBLIC ENTRANCE HOSPITAL STREET



Key Plan

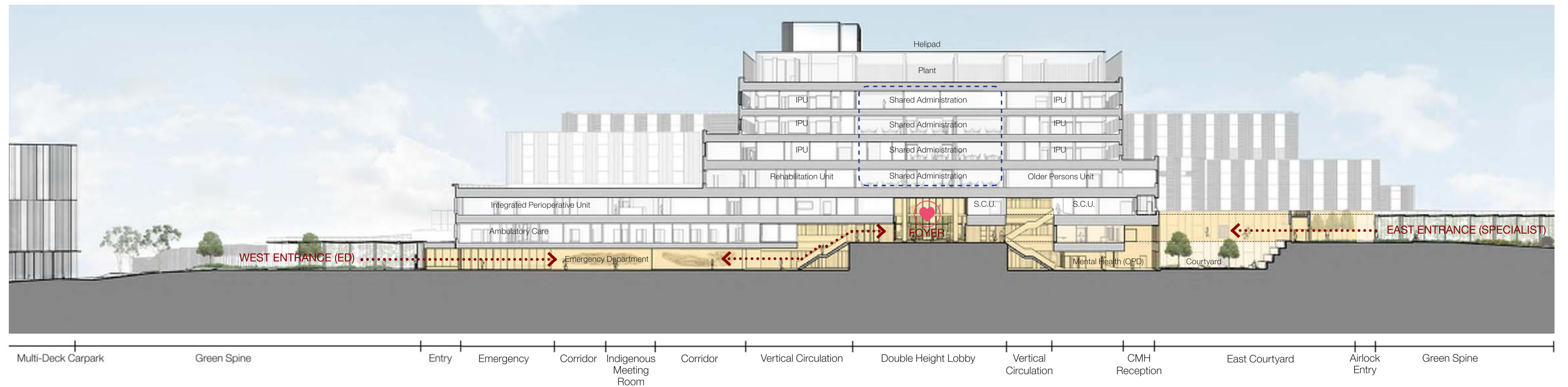


Figure 91. Design Section - Public Street / Green-Spine