



An aerial photograph of a coastal region. On the left, a dense residential neighborhood with many small houses is visible. A river or stream flows through the center, winding between the houses and a large, dark, irregularly shaped pond. To the right of the pond, a sandy beach runs along the coastline, bordered by a line of trees. The ocean is visible on the far right, with some small boats or structures in the water. The text '2.0 SITE SELECTION' is overlaid on the right side of the image, partially covering the beach and ocean area.

2.0 SITE SELECTION

2.1 THE SITE

The site for the new Tweed Valley Hospital is located off Cudgen Road between Tweed Coast Road and Kingscliff on rural land situated on the border of Kingscliff. The Project is located on a portion of 771 Cudgen Road, Cudgen, legally described as Lot 102 DP 870722 (Project Site).

The immediate surrounding environment of the hospital site includes Kingscliff TAFE (Tertiary Education) and agricultural holdings to the south, Kingscliff Hill suburb to the east, environmental area to the north and agricultural lands including Cudgen Town beyond Tweed Coast Road to the west.



Figure 3: Site Location

2.1 THE SITE (CONT.)

Key Characteristics of the site include:

- / The site is currently utilized as agricultural land (sweet potato farming), with undulating topography and is substantially clear of vegetation
- / The site comprises a develop-able “plateau” accessible along the dominant length of the Cudgen Road title boundary interface with multiple potential site entrance opportunities
- / The site is situated in close proximity vehicular access of the M1 (Pacific Highway) accessed via Tweed Coast Road
- / The site is predominantly above the Probable Maximum Flood (PMF) level. The flood prone part of the site is located along the north boundary affecting land up to AHD +8.00. The vast majority of the site is elevated located on the ridge plateau at approximately +27.00 AHD
- / The site is situated opposite the Kingscliff TAFE (Tertiary Education)
- / There are notable surrounding views accessible from site. These range from coastline views in the north east and south east, adjacent environmental area to the north with the Border Mountain Ranges featuring on the horizon spanning from the north around to the south west
- / There is an established melaleuca and she-oak treed environmental area of 36ha along the foot of the ridge, situated along the northern title boundary of the site. This area includes mature trees ranging from 15-20m in height
- / Kingscliff Hill residential area is located to the east, to the north beyond the environmental area lies Kingscliff West residential precinct, agricultural land immediately to the west and Cudgen Town beyond Tweed Coast Road. To the south of the site there exists a combination of agricultural lands and the Kingscliff TAFE (tertiary education)



Figure 4: Site Photograph

2.2

SITE SELECTION PROCESS

A site selection process was conducted in accordance with a Health Infrastructure endorsed Site Evaluation Plan.

The purpose of the Assessment Plan was to ensure that the most suitable site was selected for the new Tweed Valley Hospital and that the site selection process was fair, ethical and transparent in accordance with NSW government procedures and policy.

The site selection review process included review of over 50 sites which included approximately 20 sites submitted by landowners as part of an EOI process. The existing TTH site was also reviewed, which considered an option of acquiring adjacent lands to facilitate development of a new hospital without disruption to current operational services.

The Site Evaluation Assessment considered the following 5 major analysis criteria;

1. Urban Context
2. Environment, Heritage and Cultural
3. Built Forms and Landscaping
4. Time, Cost and Value
5. Location, Access and Traffic

Site capacity modelling was conducted on all shortlisted sites. The process included testing a generic hospital plan form to interrogate suitability. The assessment process interrogated a range of features of each site including general site fit, capacity for future expansion, renewal, forecast future growth scenario, including the extents of cut & fill required to level and/or raise the hospital above PMF level. This process was applied consistently to all sites assessed.

The site suitability analysis included due diligence studies conducted by a team of varied professional consultant disciplines, including; architect, engineering, flooding, town planning, traffic, aviation, ecological, environmental hazmat and cost.

Following a community consultation process a secondary study was conducted, comparing proposed additional alternative sites with the Project Site. This final comparative review process concluded with a project team recommendation to develop the new Tweed Valley Hospital at no.771 Cudgen Road, Cudgen (Project Site). A range of site qualities contributed to the team recommending this as the preferred to receive the new Tweed Valley Hospital, including but not limited to:

2.2 SITE SELECTION PROCESS (CONT.)

1. Developable Area.

The Project Site is 19.4 hectares, including a suitable developable zone clear of flood and bushfire risk of 12.2 hectares.

2. Site Elevation.

The region in general is prone to extensive flooding. A large proportion of the alternative sites (and in many cases road access networks) were deemed flood compromised. Site capacity studies included studying extent of fill (cost & urban impacts) required to raise the hospital and/or hospital ground above the PMF and Q100 flood levels respectively. The Project Site's preferred development zone is located at approximately AHD +27.2, well above the sites PMF level of AHD+8.00. The Project Sites elevation above sea level also provides good emergency helicopter approach and landing opportunities.

3. Nature.

The therapeutic value of providing contact with nature in the design of healthcare facilities is well documented. Integrating access and views to nature and landscaping is considered to reduce patient dependency on pain medication during recovery, speed up recovery times and improve the overall hospital stay experience. The integration of nature also improves the patient family experience and improves the workplace environment for the hospital staff, leading to better staff retention and associated service standards. An established environmental area (trees) is located to the north of the site. North views from the hospital will be towards and over tree canopies. The bushfire consultant as advised that an APZ zone of 50m is required under the 2006 guideline. The developable zone of 12.2 hectares takes account of the more onerous new "DRAFT 2017" APZ guideline distance of 67m.

4. Functional Adjacencies.

The Project Site is located with Cudgen on the border with Kingscliff, located directly adjacent the Kingscliff Hill residential precinct. The hospital will provide a new level 5 major referral service to the region and connection with local community is important. The hospital is intended to stimulate social interaction and encourage a sense of local community ownership. To the south east, opposite the Project Site the Kingscliff TAFE combined with Kingscliff secondary school forms a local education "precinct" or sorts. The development of the hospital function and associated future supporting education and research functions present an opportunity to establish a collocated health and education precinct for the Kingscliff and Cudgen communities.

Secondly close proximity of the Project Site to built-up town lands is preferable as established services infrastructure is locally available. While infrastructure may need to be augmented to support the new hospital function, this is more economically feasible than remote locations requiring establishment of new infrastructure, including water, drainage, gas, data and electricity services.

2.2 SITE SELECTION PROCESS (CONT.)

5. Access.

The Project Site is well serviced by established roadway networks, with only a 6minute journey time from the Pacific Highway offramp north of the site. Additionally, two established bus routes currently service a bus stop on Cudgen Road, located opposite Kingscliff TAFE providing public transport access to from nearby town areas.

6. Street Frontage and Access.

A key quality of the Project Site was the extensive available development street frontage. The Project Site is roughly triangular in form, with the long end (hypotenuse) fronting Cudgen Road, being the main road from Tweed Coast Road to Kingscliff Town. Street frontage development will help activate the street, and provide passive surveillance increasing street investment and pedestrian safety. In addition to the good street frontage provides high services visibility. Future ancillary services on site include; education, social services and allied (to health) residential functions to name a few. A developed street frontage will also promote site boundary permeability with potential for direct pedestrian access to each service.

7. Project Orientation Opportunity

The Project developable area is largely level being a raised “plateau”, orientated broadly east west on its long axis. The short axis varies in depth providing a range of opportunities in a linear spine arrangement along Cudgen Road, with its deepest zone approximately at its mid-point. The site proportion is therefore ideally suited to support a large building at its centre, complemented by expansion and ancillary service development to its east and west flanks. The development spine is supported by street frontage on Cudgen Road to the south and complemented with views to the environmental area (tree canopy) to the north.

8. Air Quality

The site is raised, situated on a ridgeline. Due to the local regional climate and high rainfall levels the regions valleys tend to be humid and prone to mosquito infestation during wet seasons. The elevated site position will ensure the hospital and its external spaces will benefit from fresh air and cooling breezes, promoting a healthier healthcare environment. Access to fresh air, will provide passive design opportunities to explore the integration of passive ventilation to public and staff areas improving the hospital environment.

9. Views.

The site is elevated, raised on a ridgeline with phenomenal 360-degree views. The Project Site is situated approximately 1.5km from Wommin Bay, and views of ocean on the horizon occurs at the upper levels of the proposed hospital. The border ranges are also visible on the horizon surrounding the site to the north, west and south. The neighbouring environmental area to the north of the site is further considered a local asset and is likely to be retained in the future, securing of tree canopies. The value of views to nature is addressed at pt.3 above.

