Visual Assessment

Tweed Valley Hospital

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Prepared for: NSW Health Infrastructure

UPR	Description	Date Issued	Issued By
2876-1063	First issue	27/08/2018	Simon Waterworth
2876-1108	Second issue	20/9/2018	Jacob Sickinger
2876-1123	Final V4	20/10/2018	Jacob Sickinger

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Executive Summary

The Project involves the construction of a new major referral hospital (the Tweed Valley Hospital). The Tweed Valley Hospital will involve the development of a purpose-built hospital on a greenfield site to deliver more capacity and additional health services in a high-quality contemporary facility. The Tweed Valley Hospital is needed to, and will, provide the health services required to meet the needs of the growing population and demographic of the Tweed-Byron region, in conjunction with the other hospitals and community health centres across the region.

The development application pathway for the Project will consist of a staged State Significant Development (SSD) application under section 4.22 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), which will consist of:

- a Concept Proposal and Stage 1 early and enabling works development application (this stage); and
- a second development application for Stage 2, which will include detailed design, construction and operation of the Tweed Valley Hospital.

This visual assessment assesses the probable visual impacts of the Concept Proposal for the Tweed Valley Hospital Project. This is based on a maximum planning envelope, prior to the finalisation of built form and detailed design (Stage 2). At this stage detailed design of the Tweed Valley Hospital is not available as design development is to occur. A separate development application will be prepared to assess impacts associated with Stage 2, which is expected to involve the hospital detailed design, main works and operation.

It is important to note that the assessment is based on a Concept Proposal and maximum planning envelope for the new hospital. This does not represent built form or actual massing, but rather the maximum envelope within which, through the detailed design process, the building and form would be developed and articulated. The envelope's anticipated zonal densities (see plans) also indicate that final built form density would reduce toward the upper levels of the envelope. Hence the maximum planning envelope represents a worst-case scenario. The detailed design response will develop and refine the building form, including massing, articulation and appearance of the building.

Based on the assessment of the Concept Proposal and proposed planning envelope for the Tweed Valley Hospital, an obvious change to the site and local landscape will occur and a reduction in visual quality of various view frames would be experienced, including impact to the scenic qualities of the Cudgen District. However, all view frames would maintain a reasonable visual amenity standard and measures have been and would be considered to minimise visual impact. The most affected west-facing and elevated residential areas would also still retain appreciable distant views of natural landscape features, including bushland, hinterland and ranges, although some residences are likely to lose distant views of Mt Warning (dependent on final form and detailed design).

The envelope has been established based on the anticipated building typology and height of the hospital. As discussed in the Built Form and Urban Design Report appended to the Environmental Impact Statement (EIS), the preferred arrangement which is currently undergoing design development would fit within the proposed maximum planning envelope and is expected to take the form of an Inpatient Unit (IPU) zone on podium (stacked typology) building arrangement. This reflects various design requirements for the development including environmental constraints (e.g. flood, biodiversity, bushfire, geotechnical), utilising environmental efficiencies (solar access, ventilation, energy efficiency and amenity) and maximising operational circulation efficiencies both for patient safety and economies of movement and care that will benefit both patients and staff at the facility. The building typology and

planning envelope has also considered the visual impact on the local landscape and receivers. Substantial setbacks from the site's boundaries and surrounding sensitive land uses are provided, as well as other measures to reduce perceived height. Development of the built form within the envelope would occur during detailed design (Stage 2).

The combination of amended planning controls for the Project Site, public benefit associated with the Project and design intent and measures to minimise the visual impact supports the reasonableness of the Project. Recommendations regarding the mitigation of visual impact associated with the Project based on the Concept Proposal include:

- Development of a high-quality architectural design response, including articulated form, subject to further assessment at Stage 2.
- Materials and finishes associated with the development should be designed to be non-reflective and complimentary to surrounding natural colour palettes where possible.
- Outdoor lighting design and operation should be compliant with *AS4282 – Control of obtrusive effects of outdoor lighting*.
- Existing vegetation should be retained onsite where possible (refer to the proposed tree removal/ preservation plan and noting access point and sightline requirements) and further on-site landscaping opportunities investigated and developed (refer to concept landscape masterplan appended to the EIS) to improve visual amenity and potential screening of the development to mitigate impacts on sensitive visual receivers.

1. Introduction

1.1 Purpose of this Report

GeoLINK has been engaged by Health Infrastructure to prepare a visual assessment to accompany the SSD application under Part 4 Division 4.7 of the EP&A Act for the development of the Tweed Valley Hospital Project on a greenfield site at 771 Cudgen Road, Cudgen NSW – part of Lot 102 DP 870722 (the Project Site).

Illustration 1.1 shows the locality of the location of the development area.

The concept plans for the Project are provided as an appendix to the EIS. The view point analysis and envelope montages that have informed this assessment are also attached at **Appendix A**.

1.2 Structure and Scope of Report

The purpose of this visual impact assessment is to assess the probable visual impacts of the Concept Proposal for the Tweed Valley Hospital Project to assist the planning authority in determining the Development Application (DA). **Section 1** of this report identifies the assessment purpose, scope and site. **Section 2** provides a description of the Tweed Valley Hospital Project and Concept Proposal being assessed. The visual assessment methodology is presented in **Section 3**. The visual impact assessment of the Concept Proposal is presented in **Section 4**. The key planning framework relevant to visual impact associated with the Project and Concept Proposal is addressed in **Section 5**. **Section 6** provides the assessment conclusion.

1.3 Locality Description

The Project Site is Lot 102 DP 870722, located at 771 Cudgen Road, Cudgen NSW. The site fronts Cudgen Road and is located immediately west of the Kingscliff urban area. It has proximal access to the Tweed Coast Road (approximately 300 m to the west of the site), which connects to the Pacific Motorway (M1) 2.5 km to the north. The site is approximately 13.5 km south of Tweed Heads Central Business District (CBD) (refer to **Illustration 1.1**).

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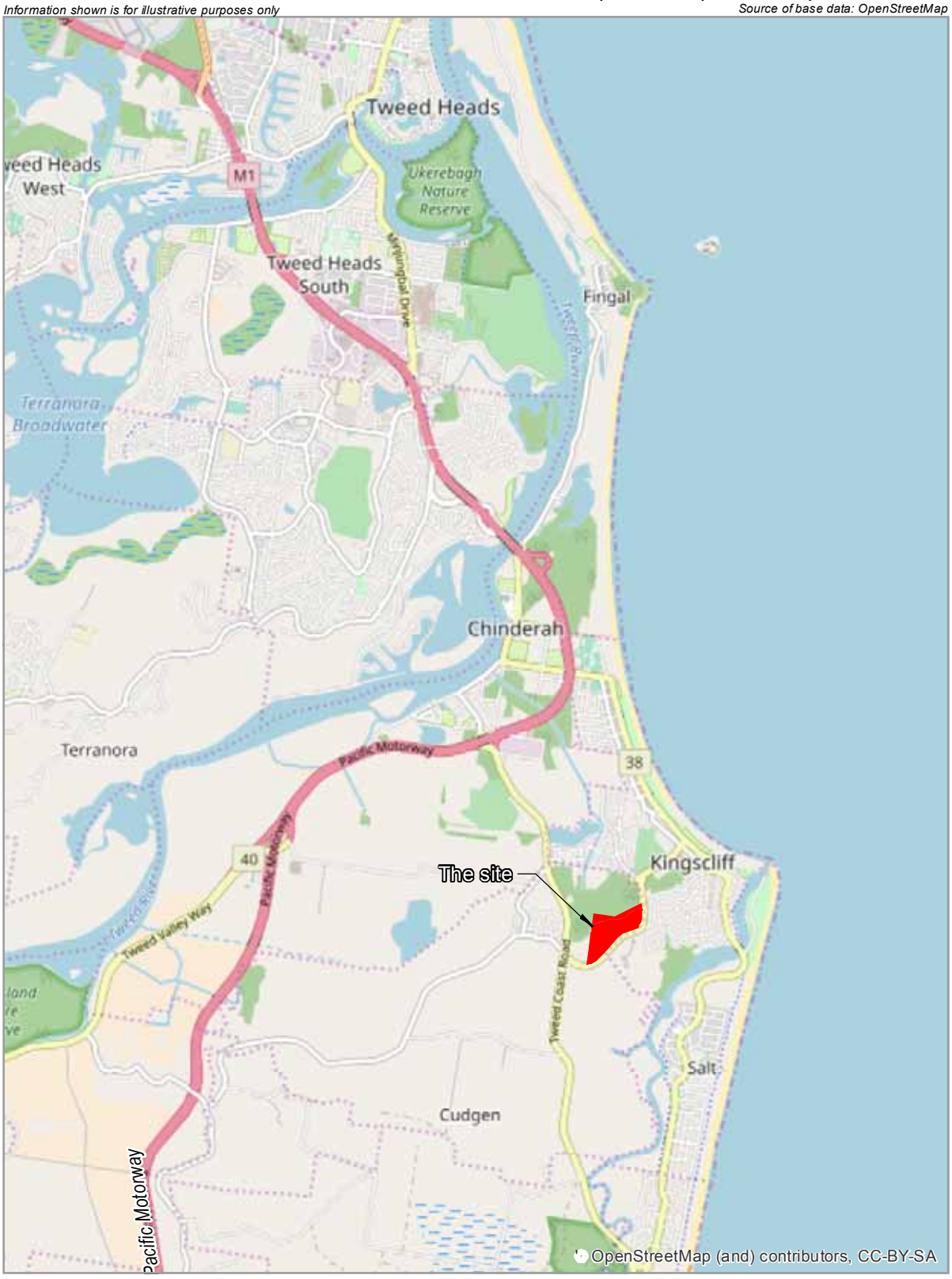
Information shown is for illustrative purposes only

Source of base data: OpenStreetMap



0 1.5 Km

Locality Plan

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2682-1094

Illustration 1.1

2. Project Description

2.1 The Project

Health Infrastructure proposes to undertake the development of the Project via a Staged SSD application for the following components:

- a concept development application and Stage 1 early and enabling works; and
- a second development application for Stage 2, which will include detailed design, main construction and operation of the Tweed Valley Hospital.

The current application is for a Concept Proposal of the Tweed Valley Hospital and Stage 1 early and enabling works.

The Concept Proposal is informed by service planning to 2031/32 and has an expected gross floor area in the range of 55,000 m^2 to 65,000 m^2. The maximum planning envelope establishes a top of envelope height of RL 59.1 m, with a maximum envelope height of RL 67.1 m that includes rooftop helipad and lift core.

Stage 1 includes early and enabling works as described in the EIS.

The envelope has been established based on the anticipated building typology and height of the hospital. As discussed in the Built Form and Urban Design Report appended to the EIS, the preferred arrangement which is undergoing design development would fit within the proposed maximum planning envelope and is expected to take the form of an IPU zone on podium (stacked typology) building arrangement. This reflects various design requirements for the Project including environmental constraints (e.g. flood, biodiversity, bushfire, geotechnical), utilising environmental efficiencies (solar access, ventilation, energy efficiency and amenity) and maximising operational circulation efficiencies both for patient safety and economies of movement and care that will benefit both patients and staff at the facility. The building typology and planning envelope has also considered the visual impact on local receivers and the scenic qualities of the locality, and substantial setbacks from the site's boundaries and surrounding sensitive land uses are provided. Development of the built form within the envelope would occur during detailed design (Stage 2).

An example of the visual impact design consideration includes (but is not necessarily limited to):

- The project design team undertaking an extensive master planning and building typology options analysis, as outlined in the Built Form and Urban Design Report appended to the EIS.
- Providing generous setbacks between the main hospital building and site boundaries.
- Preparing shadow diagrams to reflect the potential of overshadowing impact of the proposed planning envelopment (which is negligible) at hourly intervals from 9.00 am to 3.00 pm during the winter solstice (June 21).
- Responding to site topography and locating taller components to the north end of the developable site plateau, in order to minimise visual impacts (being furthest away from existing neighbouring buildings and transitioning the scale of built form in relation to the public realm) and minimising overshadowing.

More detail on the Concept Proposal and design response is provided in the Built Form and Urban Design Report that accompanies the EIS.

The current application assesses the probable visual impacts of the Concept Proposal of the Project. This is based on a maximum planning envelope, prior to the finalisation of built form and detailed design (Stage 2). At this stage detailed design of the Tweed Valley Hospital is not available as design development is ongoing. A separate development application will be prepared to assess impacts associated with Stage 2, which is expected to involve the hospital detailed design, main works and operation.

3. Visual Assessment Methodology

3.1 Assessment Methodology

There are no set guidelines within Australia regarding the methodology for visual impact assessment. The methodology applied to the visual assessment of the Concept Proposal has been developed from consideration of the following key documents:

- Environmental Impact Assessment Practice Note, Guideline for Landscape Character and Visual Impact Assessment (EIA-N04) NSW RMS (2013);
- Visual Landscape Planning in Western Australia, A Manual for Evaluation, Assessment, Siting and Design, Western Australia Planning Commission (2007);
- Guidelines for Landscape and Visual Impact Assessment, (Wilson, 2002);
- Tweed Shire Scenic Landscape Evaluation Volumes 1 and 2 1995;
- Visual Management System Tweed Pilot 2004 - Coastal Comprehensive Assessment.

In order to assess the visual impact of the Concept Proposal, it is necessary to identify a suitable scope of accessible visually sensitive receivers (VSRs) impacted by it, evaluate the visual sensitivity of the Concept Proposal to each VSR and determine the overall visual impact of the Concept Proposal.

Accessible VSR views that feature a prominent, direct and mostly unobstructed line of sight to the Project (referred to as the 'view frame') are used to assess the visual impact of the Concept Proposal. Impacts to each VSR as a result of the Concept Proposal are determined by evaluating the visual quality of the view frame experienced by the VSR and determining impacts to the visual sensitivity of each VSR.

View frames of high visual quality are those featuring a variety of natural environments/ landmark features, long range (distance) views and with no or minimal disturbance as a result of human development or activity. View frames of low visual quality are those featuring highly developed environments and short range (distance) views with little or no natural features. Examples of varying quality view frames are presented in **Plate 3.1** to **Plate 3.3**.

Visual sensitivity is evaluated through consideration of distance of the VSR to the Concept Proposal, quality of the view prior to the Concept Proposal, the context of existing development and natural features within the view frame and how the Concept Proposal will affect the visual quality of the view frame. Visual sensitivity provides the reference point to the potential visual impact of the Concept Proposal to receivers located within and near the VSR location.

Plate 3.1 High quality view

Plate 3.2 Medium quality view

Plate 3.3 Low quality view

Visual quality and visual sensitivity is measured using a 16-point scale with corresponding value statement as shown in **Table 3.1**.

Desktop surveys, supported by inspections, were undertaken to determine potential key accessible VSRs with clear lines of sight to the Project Site and Concept Proposal. VSR selection for the assessment is based on key views likely to result in the greatest level of visual impact associated within the Project and therefore does not consider all views impacted by the Project. Ten key VSR photo locations were identified to the north, east, south and west of the site (refer to **Figure 3.1**).

The process used to create the visual assessment imagery was developed and undertaken by STH + Bates Smart Architects. Photographs and land survey was undertaken on 1 August 2018 at each of the VSR locations to ensure accuracy of modelled imagery used to assess the visual impact of the Concept Proposal. The hospital planning envelope was used to create a red wireframe line over the view image, in a 3D software environment (e.g. Autodesk, 3Ds Max) with the survey information and view frame synchronised, to create an accurate montage scene illustrating the maximum planning envelope on the site for the hospital as viewed from different points and elevations surrounding the Project Site.

The ten VSR locations to be assessed and key imagery details are provided in the **Table 3.2**. The location of the VSRs are shown at **Figure 3.1.**

Table 3.1 Visual Assessment Scale

Scale	*Value*	*Visual quality*	*Visual impact*
0	**Negligible**	N/A	No negative impact on the pre-existing visual quality of the view.
1	**Low**	Predominant presence of low quality manmade features. Minimal views of natural formations (e.g. cliffs, mountains, coastlines, waterways, ridges etc). Uniformity of land form.	A minor negative impact on the pre-existing visual quality of the view. Examples: - Minor impacts on natural landscapes. - No impact on iconic views - Impacts on a small number of receivers. - Significant distance between the development and receiver.
2			
3			
4			
5			
6	**Medium**	Presence of some natural features mixed with manmade features. Some views of distinct natural formations (e.g. cliffs, mountains, coastlines, waterways, ridges etc).	A medium negative impact on the pre-existing visual quality of the view: Examples: - Moderate impacts on iconic views or natural landscapes. - Impacts on a moderate number of receivers. - Located nearby the receiver.
7			
8			
9			
10			
11	**High**	Predominantly natural features. Minimal manmade features, however if present of a high architectural standard. Significant views of distinct natural formations (e.g. cliffs, mountains, coastlines, waterways, ridges etc). Presence of iconic regional views or landmark features.	A high negative impact on the pre-existing visual quality of a view: Examples: - Loss of iconic views. - Impacts on a significant number of receivers. - Overshadowing effect. - Directly adjacent the receiver.
12			
13			
14			
15			

Table 3.2 Location of Assessed Visually Sensitive Receivers

Location	*Imagery Details*
VIEW 1 McPhail Avenue	- Ground RL: +39.114 AHD - Camera Height RL: +40.514 AHD - Distance to site: 220 m - 24 mm Focal Length using Canon EOS 6D
VIEW 1a Oceanview Crescent	- Ground RL: +35.844 AHD - Camera Height RL: +37.194 AHD - Distance to site: 164 m - 17 mm Focal Length using Canon EOS 6D
VIEW 2 Dinsey Street	- Ground RL: +44.310 AHD - Camera Height RL: +45.720 AHD - Distance to site: 260 m - 24 mm Focal Length using Canon EOS 6D
VIEW 3 Guilfoyle Place	- Ground RL: +15.323 AHD - Camera Height RL: +16.753 AHD - Distance to site: 388 m - 24 mm Focal Length using Canon EOS 6D
VIEW 4: Clarke Street	- Ground RL: +26.493 AHD - Camera Height RL: +27.893 AHD - Distance to site: 647 m - 17 mm Focal Length using Canon EOS 6D
VIEW 5: Kingfisher Circuit	- Ground RL: +3.2997 AHD - Camera Height RL: +4.6747 AHD - Distance to site: 231 m - 24 mm Focal Length using Canon EOS 6D
VIEW 5a: Bellbird Drive	- Ground RL: +3.485 AHD - Camera Height RL: +4.855 AHD - Distance to Site: 448 m - 17 mm Focal Length using Canon EOS 6D
VIEW 6: Intersection Tweed Coast road and Cudgen Road	- Ground RL: +15.554 AHD - Camera Height RL: +16.954 AHD - Distance to site: 280 m - 17 mm Focal Length using Canon EOS 6D
VIEW 7: Cudgen Road	- Ground RL: +26.2933 AHD - Camera Height RL: +27.6 6 3 3 AHD - Distance to site: 19 m - 17 mm Focal Length using Canon EOS 6D
VIEW 8: Intersection of Cudgen Road and Turnock Street	- Ground RL: +23.7595 AHD - Camera Height RL: +25.1295 AHD - Distance to site: 38 m - 17 mm Focal Length using Canon EOS 6D

Limitations associated with undertaking the visual assessment includes:

- No set guidelines within Australia regarding the methodology for visual impact assessment.
- Availability of suitable accessible locations (public spaces) to use for locational examples of how the Project would impact the visual landscape. This means it is not possible to assess all visual impacts associated with the Project.

- Assessment is based on a Concept Proposal that identifies a maximum planning envelope, without final forms or detailed design being available. Therefore, form and massing cannot be assessed at this stage and the maximum envelope represents a worst-case scenario.
- Planning envelope and montage images have been created using due skill, diligence and accuracy with information and software that are available at the time of production. These images represent the best available means to provide context regarding the envelope within which the building would be developed and articulated at Stage 2, and therefore do not represent the actual development.
- Individual sentiment towards a development largely shapes the perception of 'visual impact' and it is impossible to accurately gain this level of detail from all members of the community.

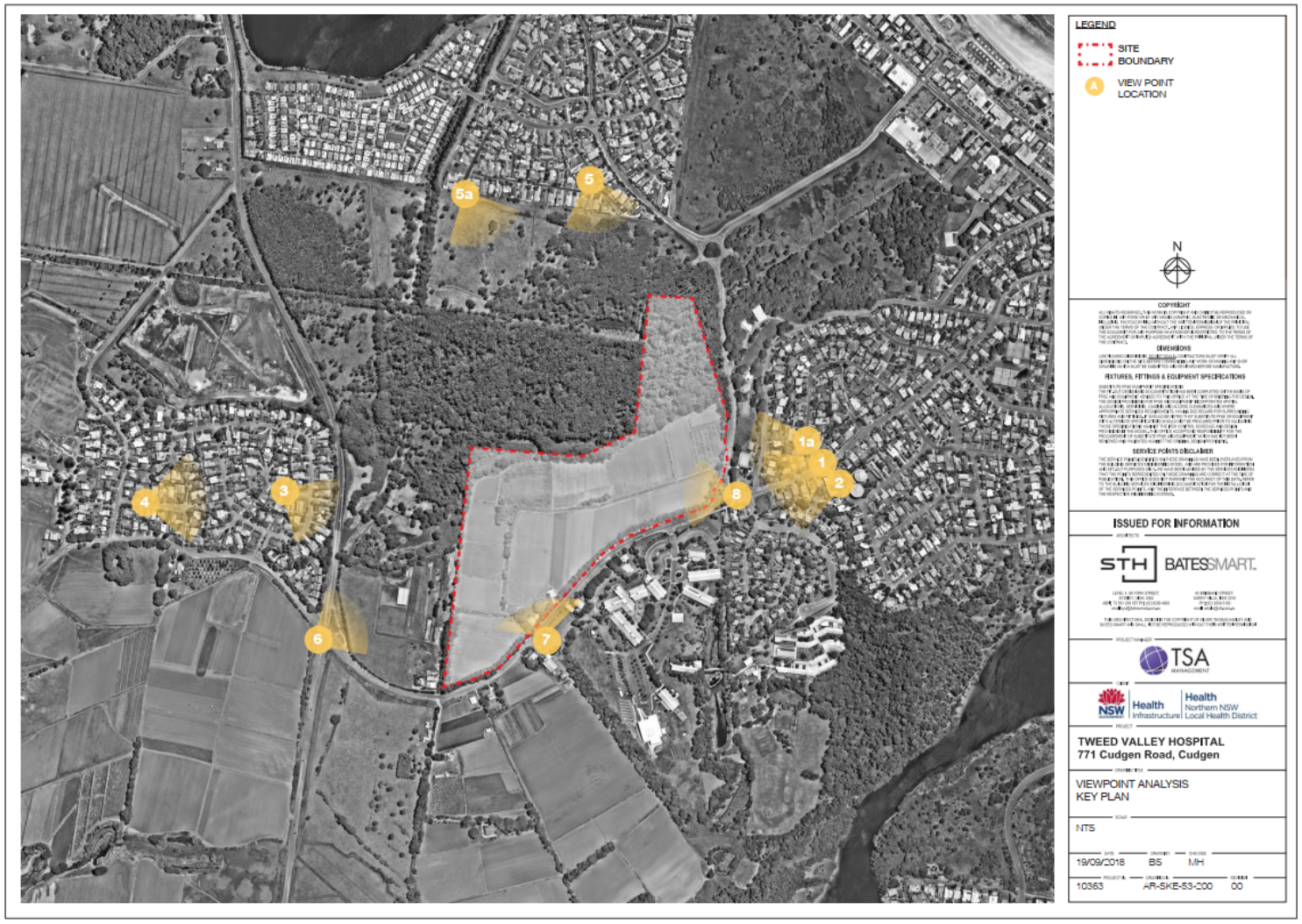

Figure 3.1 **VSR Photo Locations**

4. Visual Assessment

4.1 The Visual Setting

The Project Site is rural land, located on the edge of the outer Kingscliff urban area with an elevation range of approximately one metre RL to 27 m RL. A stand of trees traverses the southern and eastern boundaries of the site along Cudgen Road and Turnock Street, providing some visual screening to the site.

East of the site is the Kingscliff urban and residential area that rises to a level of approximately 56 m RL. Some elevated residences within this area have views to the site within 330 m of the Project Site. Views orientated to the west in the direction of the Project include the immediate residential areas, Mt Warning and the distant escarpments of the Border Ranges National Park (refer to **Plate 4.1**).

Land directly north of the site is coastal wetlands and rural land. The wetland area sits at around one metre RL and provides some natural screening from residential land further north. The residential development to the north is sited at around eight metres RL. Views orientated to the south in the direction of the Project include the immediate residential areas, rural lands and vegetated coastal wetlands (refer to **Plate 4.2**).

To the south-east, on the opposite side of Cudgen Road, is Kingscliff TAFE and five residences that are situated at approximately the same level as the Project Site. Views orientated to the north and west in the direction of the Project include the immediate residential areas and trees bordering the site along Cudgen Road (refer to **Plate 4.3**).

To the south, south-west and west of the site is rural/ farmland that varies in elevation of around 10 m RL to 30 m RL. The village of Cudgen is located to the west, on the western side of Tweed Coast Road. The village varies in elevation from around RL 10 to 30 m. Areas of vegetation directly west of the site provide some visual screening of the Project and development area. Views orientated to the east in the direction of the Project include the immediate residential areas and tree line located to the west of the development area (refer to **Plate 4.4**).

A plan view of the visual landscape and land use context associated with the local area is presented at **Illustration 4.1**.

Plate 4.1 View west from elevated areas Kingscliff urban and residential area

Plate 4.2 View south from residential areas north of the site

Plate 4.3 View north from residence directly south of the site

Plate 4.4 View east from Cudgen Village

The draft Kingscliff Locality Plan (KLP) and Development Control Plan (DCP) identify that some of the best views within the locality are experienced from the highest points of Kingscliff Hill and include elevated views west around to Mt Warning and the Border Ranges. The Tweed Shire Scenic Landscape Evaluation (1995) identifies the high scenic value of the Cudgen district (location within which the Project is situated) as a result of the rural landscape contrasted by forested hills. Similarly, the Visual Management System for NSW Coast, Tweed Pilot (2004) identifies the site as being within the northern east corner of the Cudgen Plateau; a high visual quality rural landscape with low capacity for change.

Overall, the quality of the visual environment of the area in which the proposed hospital is located (at the rural/ urban interface) has been assessed to be of medium value given the mix of urban and natural features generally present in view frames and being at the north eastern tip of the Cudgen Plateau with surrounding urban elements present. The visual environment associated with the Project Site would be considered of value to both the local community and individual visual receivers with views towards the proposed hospital. The visual environment of the Project's footprint/ development area therefore has value at a local scale, including the Cudgen district.

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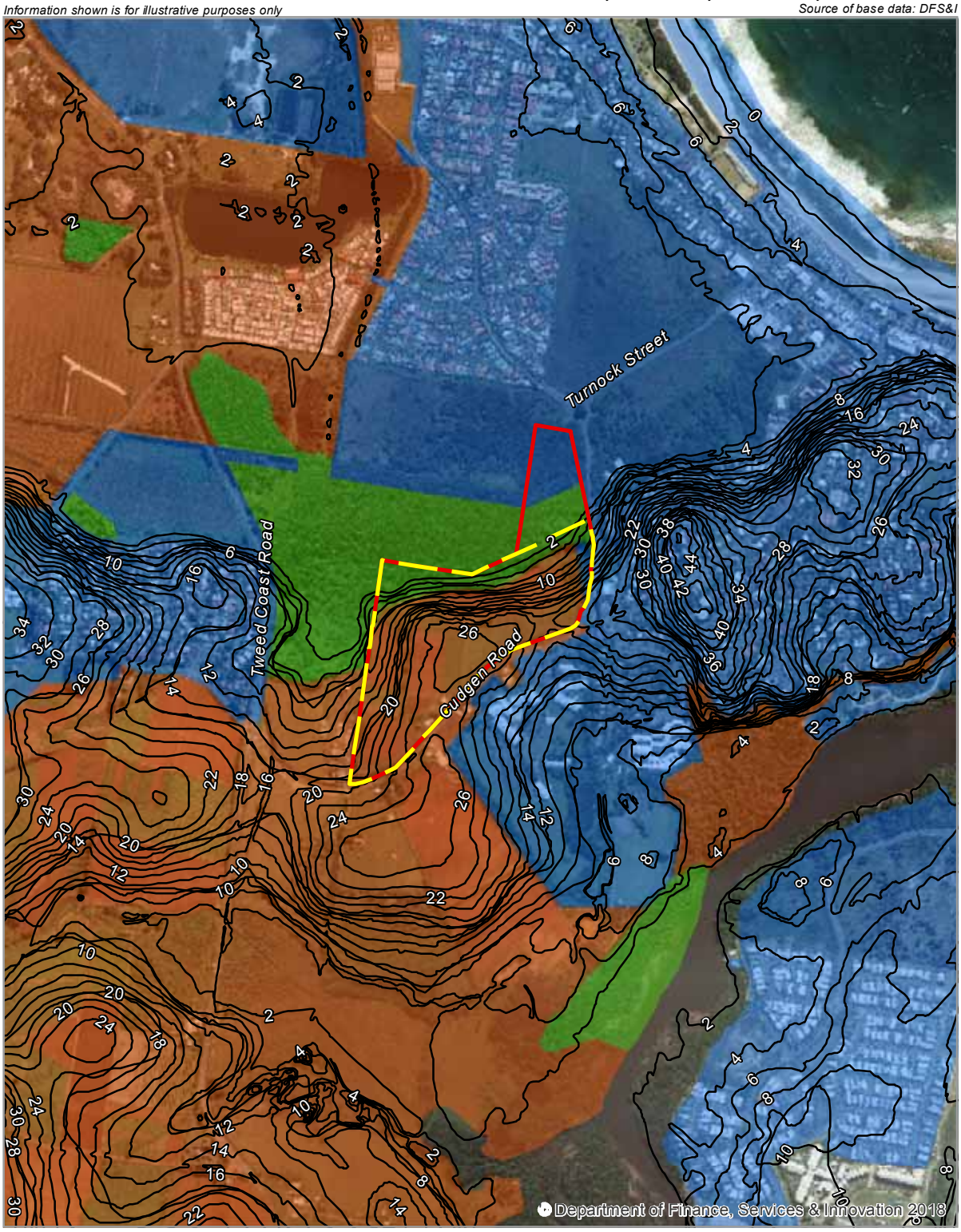
Information shown is for illustrative purposes only

Source of base data: DFS&I



LEGEND

- Project site
- Lot boundary
- Environmental
- Rural
- Urban
- Contour at 2m intervals

0 350

Landscape Context

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Illustration 4.1

4.2 Key VSR Impact Assessment

The following subsections assess the potential visual impacts of the Concept Proposal on the identified ten VSRs. A plan showing the key VSR photo locations is provided at **Figure 3.1**. Compiled images of the VSR view frames with montage scene illustrating the maximum planning envelope is provided at **Appendix A**.

4.2.1 VIEW 1: McPhail Avenue

4.2.1.1 Visual Quality

The VSR is located in the elevated residential area east of the Project Site on McPhail Avenue (also known as Kingscliff Hill). The view frame from the VSR includes the road formation, overhead power services and urban area extending west towards the site. Mt Warning and the distant escarpments of the Border Ranges National Park provide valued views located beyond the site. The hinterland, bushland and mountains provide high quality elements to the view frame. Given the extent of urban development within the view frame, long range (distance) of the view and presence of landmark features (Mt Warning and Border Ranges), the overall quality of the view is considered **medium (scale 10)**.

4.2.1.2 Visual Sensitivity

The Project Site boundary is located approximately 220 m from the VSR and the view frame quality is considered **medium (scale 10)**. The VSR elevation is approximately RL 39.1 m. The view frame of the VSR would be experienced by road users/ pedestrians and residences situated within the adjoining elevated area. The Concept Proposal is located within a visual setting featuring extensive urban development with expansive views of the hinterland, bushland and mountains including natural landmark features (Mt Warning and the Border Ranges). Due to the proximity of the site to the VSR, the hospital envelope would comprise a substantial component of the view frame. **Plate 4.5** shows the proposed outlined of the planning envelope. The envelope rises above the tree line and existing residential areas located in the view frame foreground. The envelope partially blocks previous views of hinterland, bushland and mountains (including the Border Ranges) located in the background of the view frame. However, general broad panoramic views and appreciation of these distant visual qualities would be maintained. The envelope would also extend into the skyline. The hospital envelope does not obstruct distant views of Mt Warning. Given the short distance of the envelope from the VSR and extent of urban development within the view frame foreground, visual sensitivity of the Concept Proposal to the VSR is considered **medium (scale 10)**. The construction of the hospital would result in a reduction in the overall quality of the view frame and view quality post development is considered **medium (scale 8)**.

Plate 4.5 VSR view frame taken from McPhail Avenue

4.2.2 VIEW 1A: Oceanview Crescent

4.2.2.1 Visual Quality

The VSR is located in the elevated residential area east of the Project Site on Oceanview Crescent. The view frame from the VSR includes overhead power services and urban area extending west towards the site. Mt Warning and the Border Ranges National Park provide valued landmark features located beyond the site. The hinterland, bushland and mountains provide high quality elements to the view frame. Given the extent of urban development within the view frame, long range (distance) of the view and prominence of landmark features the overall quality of the view is considered **medium (scale 10)**.

4.2.2.2 Visual Sensitivity

The Project Site boundary is located approximately 164 m from the VSR and the view frame quality is considered **medium (scale 10)**. The VSR elevation is approximately RL 35.8 m. **Plate 4.6** shows the proposed outlined of the planning envelope. The view frame of the VSR would be experienced by road users/ pedestrians and residences along/ around the adjoining elevated area. The Concept Proposal is located within a visual setting featuring extensive urban development, with extensive views of the hinterland, bushland and mountains including natural landmark features (Mt Warning and the Border Ranges). Due to the proximity to the VSR, the envelope would comprise a significant component of the view frame. The envelope extends above residential areas and the tree line located in the view frame foreground. The envelope partially blocks previous views of hinterland, bushland and mountains including the Border Ranges and part of Mt Warning located in the background of the view frame. However, general broad views of these natural distant visual features, including hinterland/ ranges, would remain appreciable. The envelope also extends into the skyline. Given the short distance of the Concept Proposal from the VSR, extent of urban development, and that the envelope obstructs part of Mt Warning; visual sensitivity of the Concept Proposal to the VSR is

considered **high (scale 11)**. It is likely that views of Mt Warning from some residences, including those further north of this view frame would be completely obstructed by the Project; loss of the landmark view would be considered a **high (scale 13)** impact regarding the visual sensitivity of the Project. The construction of the hospital would result in a reduction in the overall quality of the view frame and view quality post development is considered **medium (scale 8)**.

Plate 4.6 VSR view frame taken Oceanview Crescent

4.2.3 VIEW 2: Dinsey Street

4.2.3.1 Visual Quality

The VSR is located in the elevated residential area east of the Project Site, directly west of the water reservoir on Dinsey Street. The view frame from the VSR includes the urban area extending west towards the site. Mt Warning, the Border Ranges National Park (both landmark features) and hinterland, bushland and mountains provide high quality elements to the view frame. Given the extent of urban development within the view frame, long range (distance) of the view and prominence of landmark features the overall quality of the view is considered **medium (scale 10)**.

4.2.3.2 Visual Sensitivity

The Project Site boundary is located approximately 260 m from the VSR and the view frame quality is considered **medium (scale 10)**. The VSR elevation is approximately RL 44.3 m. **Plate 4.7** shows the proposed maximum planning envelope. The view frame of the VSR would be experienced from parts of the local streetscape and by residences along the adjoining elevated area. The Concept Proposal is located within a visual setting featuring extensive urban development and extensive natural views including natural landmark features (Mt Warning and the Border Ranges). Due to proximity to the VSR, the envelope would comprise a significant component of the view frame. The envelope extends above residential areas in the view frame foreground. The envelope partially blocks previous natural views, including the Border Ranges. The envelope also extends into the skyline. Given the short distance of the Concept Proposal from the VSR, extent of urban development, and that the envelope

partially obstructs natural views, including the Border Ranges; visual sensitivity of the Concept Proposal to the VSR is considered **medium (scale 10)**. The construction of the hospital would result in a reduction in the overall quality of the view frame and view quality post development is considered **medium (scale 8)**.

Plate 4.7 VSR view frame taken from Dinsey Street

4.2.4 VIEW 3: Guilfoyle Place

4.2.4.1 Visual Quality

The VSR is located in the elevated residential area of Cudgen, east of the Project Site at Guilfoyle Place. The view frame from the VSR includes the urban area, road formation and tree line extending east towards the site. Given the extent of urban development within the view frame, short range (distance) of the view and minimal presence of significant natural features the overall quality of the view is considered **medium (scale 7)**.

4.2.4.2 Visual Sensitivity

The Project Site boundary is located approximately 388 m from the VSR and the view frame quality is considered **medium (scale 7)**. The VSR elevation is approximately RL 15.3 m. **Plate 4.8** shows the proposed maximum planning envelope. The view frame of the VSR would be experienced by nearby residences and to varying extents general users of these local streets. The Concept Proposal is located within a visual setting featuring urban development without any long-range views. Due to proximity to the VSR, the envelope would comprise a significant component of the view frame. The envelope extends above the residential area tree line and into the skyline. Given the short distance of the Concept Proposal from the VSR, extent of urban development view, and due to the envelope extending into the skyline the visual sensitivity of the Concept Proposal to the VSR is considered **medium (scale 6)**. The construction of the hospital would result in a reduction in the overall quality of the view frame and view quality post development is considered **medium (scale 6)**.

Plate 4.8 VSR view frame taken from Guilfoyle Place

4.2.5 VIEW 4: Clarke Street

4.2.5.1 Visual Quality

The VSR is located in the elevated residential area of Cudgen, east of the Project Site at Clarke Street. The view frame from the VSR includes the urban area, road formation, tree line extending east towards the site and elevated residential area located on the eastern side of the hospital site. Given the extent of urban development within the view frame, short range (distance) of the view and minimal presence of significant natural features the overall quality of the view is considered **medium (scale 7)**.

4.2.5.2 Visual Sensitivity

The Project Site boundary is located approximately 647 m from the VSR and the view frame quality is considered **medium (scale 7)**. The VSR elevation is approximately RL 26.4 m. **Plate 4.9** shows the proposed maximum planning envelope. The view frame of the VSR would be experienced by nearby residences and to varying extents by general users of these local streets. The Concept Proposal is located within a visual setting featuring urban development without any long-range views. The hospital envelope extends above the residential area, tree line and into the skyline. Given the distance of the Concept Proposal from the VSR, extent of urban development and due to the development extending into the skyline the visual sensitivity of the Concept Proposal to the VSR is considered **medium (scale 6)**. The construction of the hospital would result in a reduction in the overall quality of the view frame and view quality post development is considered **medium (scale 6)**.

Plate 4.9 VSR view frame taken from Clarke Street

4.2.6 VIEW 5: Kingfisher Circuit

4.2.6.1 Visual Quality

The VSR is located in the low-lying residential area north of the Project Site at Kingfisher Circuit. The view frame from the VSR includes the urban area, road formation and tree line (coastal wetland) located between the urban area and hospital site. Given the extent of urban development within the view frame, short range (distance) of the view and presence of natural features the overall quality of the view is considered **medium (scale 8)**.

4.2.6.2 Visual Sensitivity

The Project Site boundary is located approximately 231 m from the VSR and the view frame quality is considered **medium (scale 8)**. The VSR elevation is approximately RL 3.2 m. **Plate 4.10** shows the proposed maximum planning envelope. The envelope would be screened from view by the vegetation located between the residential area and hospital site. The visual sensitivity of the Concept Proposal to the VSR is considered **negligible (scale 0)** on this basis. The construction of the hospital would not vary the quality of the view frame. It should be noted that the extent of screening provided by the vegetation would be provided along Kingfisher Circuit up to around the intersection at Pitta Court. Impacts west of Pitta Court would generally be comparable with those identified at the Bellbird Drive VSR (refer to Section 4.2.7).

Plate 4.10 VSR view frame taken from Kingfisher Circuit (the red line shows concept proposal being located behind and beyond the house and trees).

4.2.7 VIEW 5a: Bellbird Drive

4.2.7.1 Visual Quality

The VSR is located in the low-lying residential area north of the Project Site at the southern and of Bellbird Drive. The view frame from the VSR includes rural lands used for grazing and Coastal Wetland located between the urban area and hospital site. Given the lack of urban development within the view frame, short range (distance) of the view and presence of natural features the overall quality of the view is considered **medium (scale 9)**. It should be noted that similar views would also be experienced by residences located along Kingfisher Circuit west of the intersection at Pitta Court.

4.2.7.2 Visual Sensitivity

The Project Site boundary is located approximately 448 m from the VSR and the view frame quality is considered **medium (scale 9)**. The VSR elevation is approximately RL 3.4 m. **Plate 4.11** shows the proposed maximum planning envelope. The view frame of the VSR would be experienced by residences along Kingfisher Circuit west of the intersection at Pitta Court. The Concept Proposal is located within a visual setting featuring mostly natural features. The hospital envelope extents above the tree line and into the skyline. Given the short distance of the Concept Proposal from the VSR, lack of urban development in the view, and due to the development extending slightly into the skyline the visual sensitivity of the Concept Proposal to the VSR is considered **medium (scale 8)**. The construction of the hospital would result in a reduction in the overall quality of the view frame and view quality post development is considered **medium (scale 8)**.

Plate 4.11 VSR view frame taken from Bellbird Drive

4.2.8 VIEW 6: Intersection Tweed Coast Road and Cudgen Road

4.2.8.1 Visual Quality

The VSR is located at the intersection of Tweed Coast Road and Cudgen Road west of the hospital site. The view frame from the VSR predominantly includes the road formation, road infrastructure and powerlines. A line of palms fringe the eastern side of the road with rural land and trees located between the road and the Project Site. Given the significant extent of road and power infrastructure within the view frame, short (distance) of the view and minimal natural features, the overall quality of the view is considered **medium (scale 7)**.

4.2.8.2 Visual Sensitivity

The Project Site boundary is located approximately 280 m from the VSR and the view frame quality is considered **medium (scale 7)**. The VSR elevation is approximately RL 15.5 m. **Plate 4.12** shows the proposed maximum planning envelope. The view frame of the VSR would be experienced by road users. The Concept Proposal is located within a visual setting featuring extensive urban infrastructure with minimal natural features. The hospital envelope would be partially screened by palms fringing the eastern side of the road. Given the short distance of the Concept Proposal from the VSR, extensive presence of urban infrastructure within the view, partial visual screening by vegetation, transient visual experience of road users, and absence of residences within the general area; the visual sensitivity of the Concept Proposal to the VSR is considered **low (scale 2)**. The construction of the hospital would not result in a reduction in the overall quality of the view frame and view quality post development would remain **medium (scale 7)**.

Plate 4.12 VSR view frame taken from Intersection Tweed Coast Road and Cudgen Road

4.2.9 VIEW 7: Cudgen Road

4.2.9.1 Visual Quality

The VSR is located on Cudgen Road directly east of the Project Site. The view frame from the VSR generally includes the road formation, power lines and trees bordering the hospital site. Given the extent of urban infrastructure within the view frame, short range (distance) of the view and presence of trees the overall quality of the view is considered **medium (scale 8)**.

4.2.9.2 Visual Sensitivity

The Project Site boundary is located approximately 19 m from the VSR and the view frame quality is considered **medium (scale 8)**. The VSR elevation is approximately RL 26.2 m. **Plate 4.13** shows the proposed maximum planning envelope for the hospital. The view frame of the VSR would be experienced by residences along Cudgen Road adjacent to the hospital site and general uses of this roadway. The Concept Proposal is located within a visual setting featuring urban infrastructure with some natural features. The view is currently partially screened by trees, however sections of this vegetation, including the existing row of trees across the main site frontage, would require removal to facilitate the Project, provide access points with adequate sightlines and deliver a civic identify (refer to landscape plans in EIS). Nonetheless, a proposed landscape buffer bordering the hospital site along much of Cudgen Road would generally aid in softening, screening and/or filtering views from properties located south of Cudgen Road. Depending on the viewing angle of residences and road users (e.g. vehicles and pedestrians/ cyclists) along Cudgen Road, sensitivity to visual modification could vary and may be subject to differing levels of vegetative screening. View 7 is considered to be a reasonable representation of view frames along Cudgen Road where vegetation removal and modification would occur.

Due to the proximity of the Concept Proposal to the VSR, it would be seen through vegetation and/or openings created along the boundary of the site. Given the short distance of the Concept Proposal from the VSR, setback from Cudgen Road to the envelopes within the site and reduced or variable filtering provided by modified vegetation and proposed landscaping; visual sensitivity of the Concept Proposal to the VSR is considered **Medium (scale 10)**. The construction of the hospital would result in a reduction in the overall quality of the view frame and view quality post development is considered **medium (scale 7)**.

Plate 4.13 VSR view frame taken from Cudgen Road (note envelope is setback from boundary)

4.2.10 VIEW 8: Intersection of Cudgen Road and Turnock Street

4.2.10.1 Visual Quality

The VSR is located on Cudgen Road east of the Project Site. The view frame from the VSR includes the road formation (roundabout) and vegetation within and bordering the hospital site. Given the extent of urban infrastructure within the view frame, short range (distance) of the view and presence of trees the overall quality of the view is considered **medium (scale 8)**.

4.2.10.2 Visual Sensitivity

The Project Site boundary is located approximately 38 m from the VSR and the view frame quality is considered **medium (scale 8)**. The VSR elevation is approximately RL 23.7 m. **Plate 4.14** shows the proposed maximum planning envelope. The view frame of the VSR would be experienced by residences and road users within this general area. The Concept Proposal is located within a visual setting featuring urban infrastructure with some natural features. The Concept Proposal would be partially screened from view by trees bordering the hospital site, however some vegetation would be

removed for an access point being created with the round-about in this area. Due to the proximity of the Concept Proposal to the VSR, it would generally be seen through trees and any access openings created along the border of the site. Given the short distance of the Concept Proposal from the VSR and some visual screening provided by vegetation bordering the site; visual sensitivity of the Concept Proposal to the VSR is considered **low (scale 5)**. The construction of the hospital would result in a reduction in the overall quality of the view frame and view quality post development is considered **medium (scale 7)**.

Plate 4.14 VSR view frame taken from Intersection of Cudgen Road and Turnock Street

4.3 Visual Impact Assessment Summary

An overview of the impact of the Concept Proposal on view frames experienced by key accessible VSRs is summarised in **Table 4.1**.

Table 4.1 VSR Assessment Summary

VSR Location	*Proximity*	*View Frame Quality*	*Visual Sensitivity Impact*	*View Frame Quality with Proposal*
VIEW 1 McPhail Avenue	RL: +39.1m Distance to site: 220m	Medium (scale 10).	Medium (scale 10).	Medium (scale 8).
VIEW 1a Oceanview Crescent	RL: +35.8m Distance to site: 164m	Medium (scale 10).	High (scale 11).	Medium (scale 8).
VIEW 2 Dinsey Street	RL: +44.3m Distance to site: 260m	Medium (scale 10).	Medium (scale 10).	Medium (scale 8).

VSR Location	*Proximity*	*View Frame Quality*	*Visual Sensitivity Impact*	*View Frame Quality with Proposal*
VIEW 3 Guilfoyle Place	RL: +15.3m Distance to site: 388m	Medium (scale 7).	Medium (scale 6).	Medium (scale 6).
VIEW 4: Clarke Street	RL: +26.4m Distance to site: 647m	Medium (scale 7).	Medium (scale 6).	Medium (scale 6).
VIEW 5: Kingfisher Circuit	RL: +3.2m Distance to site: 231m	Medium (scale 8).	Negligible (scale 0).	Medium (scale 8).
VIEW 5a: Bellbird Drive	RL: +3.4m Distance to Site: 448m	Medium (scale 9).	Medium (scale 8).	Medium (scale 8).
VIEW 6: Intersection Tweed Coast road and Cudgen Road	RL: +15.5m Distance to site: 280m	Medium (scale 7).	Low (scale 2).	Medium (scale 7).
VIEW 7: Cudgen Road	RL: +26.2m Distance to site: 19 m	Medium (scale 8).	Medium (scale 10).	Medium (scale 7).
VIEW 8: Intersection of Cudgen Road and Turnock Street	RL: +23.7m Distance to site: 38m	Medium (scale 8).	Low (scale 5).	Medium (scale 7).

The quality of views and visual sensitivity relevant to the Concept Proposal has been assessed using a 16-point scale rating. The view frames associated with the assessed VSRs have a view quality range of medium (scale 7) to medium (scale 10) prior to development of the Project. The impact of the Concept Proposal, based on the conceptual maximum planning envelope, on visual sensitivity ranges between negligible (scale 0) and high (scale 11). As outlined in following paragraphs, potential full obstruction of distant views to Mt Warning would have a high (scale 13) impact regarding visual sensitivity. The view frames associated with the VSRs post development have been assessed to have a view quality range of medium (scale 6) to medium (scale 8).

In terms of local context, the Project is located within an area that features urban development and natural features that are visible from various elevated view locations. The assessment process demonstrates a reduction in the quality of view frames for all assessed VSRs other than VIEW 5: Kingfisher Circuit (negligible). The most notable area impacted is the elevated residential area located east of the site including VIEW 1 McPhail Avenue, VIEW 1A Oceanview Crescent and VIEW 2 Dinsey Street (generally west-facing areas of Kingscliff Hill).

It is likely that distant views of Mt Warning from some residences north of VIEW 1A Oceanview Crescent and VEIW 1 McPhail Avenue would be completely obstructed by the Project based on the maximum planning envelope of the Concept Proposal; loss of the landmark view would be considered a high (scale 13) impact regarding the visual sensitivity of the Project.

At this point the limitation of the visual assessment should be acknowledged including the availability of suitable accessible locations (public spaces) to present examples of how the Project would impact the visual landscape and is based on a worst-case scenario of the proposed maximum planning envelope, prior to detailed design and articulation of built form.

The Project, based on the Concept Proposal, would result in an obvious change to the site and local landscape from various viewpoints, including a reduction in visual quality and impact to the scenic quality of the Cudgen District; particularly views west from Kingscliff Hill. The Project Site is also located at the north-eastern tip of the Cudgen Plateau landscape, at the interface with Kingscliff and urban development. This, combined with the design principles and intent outlined in the Built Form and Urban Design Report, aids in reducing the impact to the broader rural landscape qualities of the main Cudgen Plateau area to the southwest. The most affected view frames, including from Kingscliff Hill, would maintain appreciable views of various distant natural landscape features and all assessed VSRs would maintain view frame qualities in the medium rating range.

4.4 Solar Access and Shadowing

Shadow diagrams have been prepared which reflect the overshadowing impact of the maximum planning envelope at hourly intervals from 9.00 am to 3.00 pm during the winter solstice (June 21) as presented in the plan set accompanying the EIS.

The shadow study demonstrates that shadows cast by the proposed hospital envelope reach the southern title boundary on Cudgen Road by 11.00 am-12.00 pm and begin to impact the front yard of 792 Cudgen Road from 3.00 pm onwards (refer to **Figure 4.1**). No further overshadowing impact will occur on other neighbouring properties and overshadowing of the public realm beyond the site boundary is also limited.

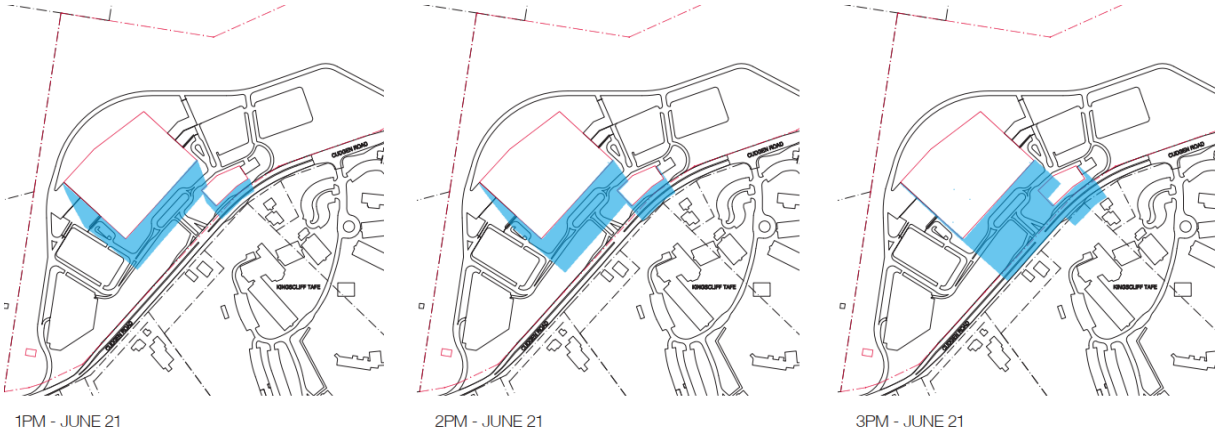

Figure 4.1 Shadow diagrams (1PM to 3PM)

5. Planning

The development application pathway will consist of a staged SSD Application under section 4.22 of the EP&A Act, which will consist of:

- a Concept Proposal and Stage 1 early and enabling works development application (this stage); and
- a second development application for Stage 2, which will include detailed design, construction and operation of the Tweed Valley Hospital.

5.1 State Significant Development (SSD)

Clause 8 of SEPP (State and Regional Development) 2011 (SRD SEPP) states that development is declared to be SSD for the purposes of the EP&A Act if:

- the Project is not permissible without development consent under Part 4 of the EP&A Act; and
- the Project is specified in Schedule 1 or 2.

The Project would not meet the requirements of Clause 58 of SEPP (Infrastructure) 2007 (ISEPP) as the development is not within an existing hospital. Therefore, it would not be permissible without development consent under Part 4 of the EP&A Act.

Clause 14 of Schedule 1 of the SRD SEPP states that:

Development that has a capital investment value of more than $30 million for any of the following purposes:

(a) hospitals,
(b) medical centres,
(c) health, medical or related research facilities (which may also be associated with the facilities or research activities of a NSW local health district board, a University or an independent medical research institute).

The Project is a hospital and has a total estimated capital investment value over $30 million. The Project would therefore be classified as SSD and requires:

- The Secretary of the Department of Planning and Environment to issue requirements for the preparation of the EIS in accordance with Section 4.39 of the EP&A Act to HI.
- The preparation of an EIS.
- Assessment of the DA as SSD by the Department of Planning and Environment under Division 4.7 of the EP&A Act.
- Determination of the DA by the Minster of Planning and Environment or delegate.
- Preliminary identification of planning risks and mitigation measures.

The Project would be staged SSD, and this assessment is based on the Concept Proposal and Stage 1. A separate EIS and SSD application would be prepared to assess Stage 2. The Project requires the Secretary of the Department of Planning and Environment to issue requirements for the preparation of the EIS in accordance with Section 4.39 of the EP&A Act to Health Infrastructure.

5.2 Secretary's Environmental Assessment Requirements (SEARs)

The Secretary of the Department of Planning and Environment issued the requirements for the preparation of the EIS on 27 September 2018.

The SEARs require that the EIS must be prepared in accordance with and meet the minimum requirements of Clause 6 and 7 of Schedule 2 of the EPAR 2000 (the Regulation).

The SEARs also include requirements for a preliminary assessment of environmental amenity considerations, including view analysis and visual assessment. This report addresses these matters.

5.3 Kingscliff Locality Plan (Draft)

The draft KLP and DCP was on public exhibition from 20 August to 24 September 2018. The KLP has been prepared to provide background and supporting information relating to the existing locality context, regional considerations, demographics, economic conditions, land uses as well as the physical and environmental characteristics of the locality to inform the development of the final KLP. Community input will be vital to the development of the final KLP. The KLP and associated DCP will provide a 30-year vision and planning framework to guide the future growth and expansion of the Kingscliff locality.

The KLP has been prepared in three Volumes including:

- Volume 01 - Kingscliff Locality Wide Strategies
- Volume 02 - Kingscliff Precinct Plans
- Volume 03 - Kingscliff Development Control Plan.

Section 2.11 (Vol 01) of the draft document addresses views and scenic protection particularly in relation to the high quality scenic landscape associated with Kingscliff and Cudgen including coastal, estuarine and hinterland view fields. The draft document acknowledges the importance of a number of view fields/ orientations and landscape characteristics. This includes west orientated elevated views from various aspects on Kingscliff Hill, including view towards Mt Warning and the Border Ranges (encompassing the Project Site). Figure 2.11 (Vol 01) of the draft KLP identifies key views relevant to the KLP (refer to **Figure 5.1**)

The document sets out four key planning principle assessment steps established from the Land and Environment Court Case Tenacity Consulting v Warringah Council (2004) NSW LEC 140 relating to view loss and are a relevant point of reference including:

- **Step One:** An assessment of the value of views to be affected by reference to their nature, extent and completeness.
- **Step Two:** A consideration of how views are obtained and what part of the property the views are obtained from.
- **Step Three:** A qualitative assessment of the extent of the impact in terms of severity particularly as to whether that impact is negligible minor, moderate, severe or devastating.
- **Step Four:** An assessment of the reasonableness of the proposal causing the impact particularly in terms of compliance with applicable planning controls and whether a different or complying design must produce a better result.

Vol 02 of the KLP identifies key KLP Precincts including Kingscliff Hill, Cudgen, West Kingscliff, and Green Edge precincts (refer to **Figure 5.2**); with the site being located within the area identified as Green Edge Precinct. Section 12.3 (Vol 02) identifies that scenic assessment should be undertaken with specific reference to the value of local community places and impact on locality visual character. Section 12.4, strategy 3 (Vol 02) identifies that impacts on views as part of the master planning/ planning proposal and development assessment process should be undertaken in regard to areas of high visual amenity within the locality.

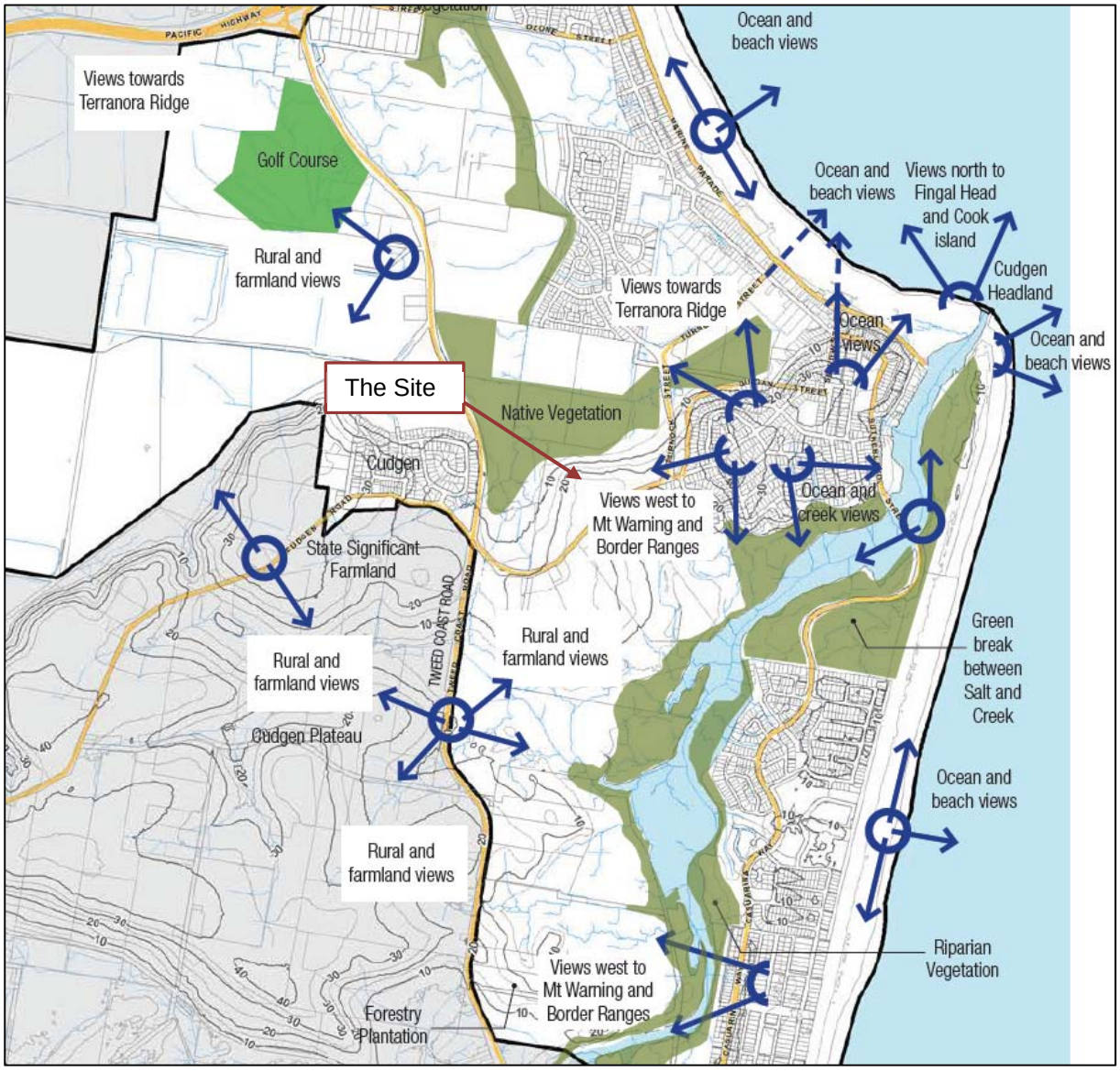

Figure 5.1 Exhibition Draft KLP Key Views

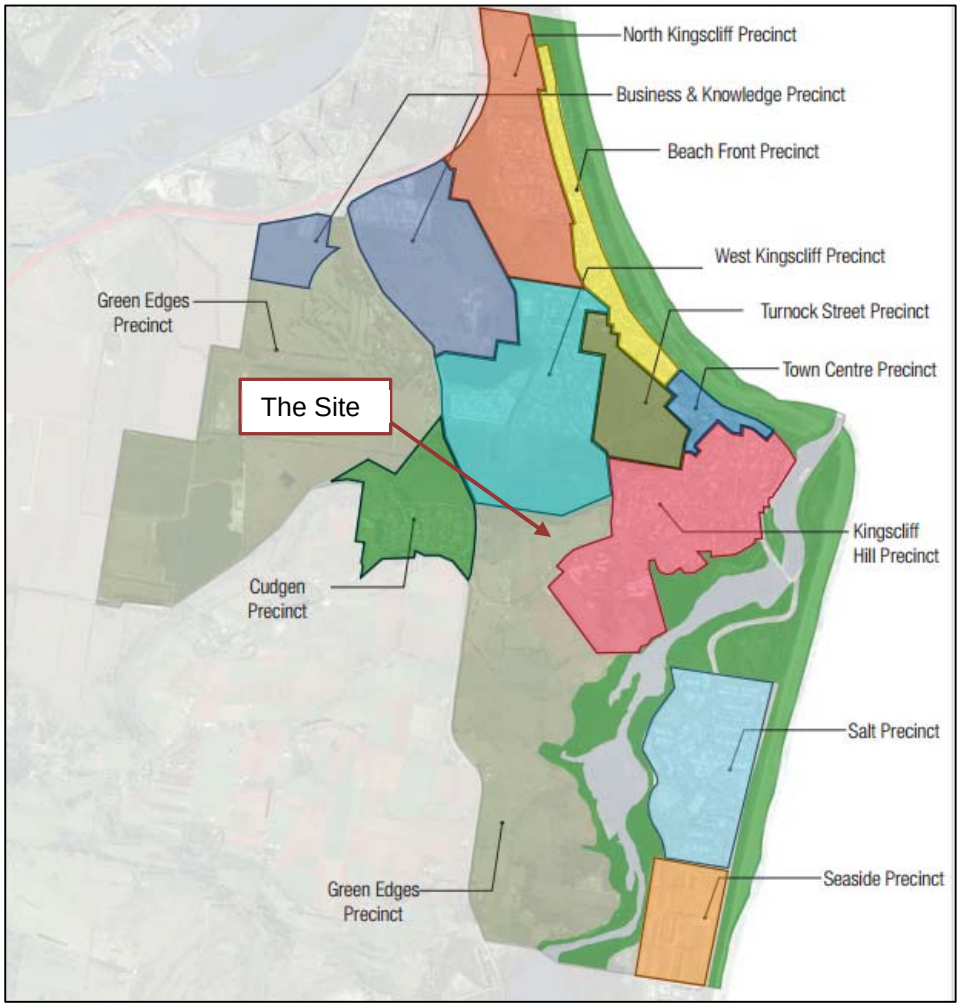

Figure 5.2 Exhibition Draft KLP Key Precincts

The aim of the Kingscliff DCP is to guide planning and design development within the Kingscliff locality through the application of planning and design principles, objectives and development controls. Section 2.4 of the DCP addresses landscape character and views. This section of the plan includes objectives around the 'maintenance of view fields including maintaining important regional and local views' (Section 2.4.2 - Objective 05) and provision of controls relating to the preparation of visual impact assessments.

Step one and two of the KLP visual assessment process is consistent with Section 3 and 4 of this report. Step three and four of the KLP visual assessment process is consistent with Section 4 and 6 of this report. The views assessed as part of this visual assessment are considered to be reasonable representations for the locality (both public realm vantage points and those that would be attributed to residential views in the general vicinity), including relevant key view fields identified in the draft KLP that would look toward the Project Site.

6. Conclusion

The Project involves the construction of a new major referral hospital. The EIS is associated with the State Significant Development (SSD) application for the new hospital - Concept Proposal and Stage 1 works, which will be assessed under Part 4 Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The staged SSD application proposes the following:

- a Concept Proposal and Stage 1 early and enabling works development application (this stage); and
- a second development application for Stage 2, which will include detailed design, construction and operation of the Tweed Valley Hospital.

This visual impact assessment assesses the probable visual impacts of the Concept Proposal based on a maximum planning envelope for the Project, prior to the finalisation of detailed design and articulation of built form. At this stage detailed design of the Tweed Valley Hospital is not available. The Concept Proposal is informed by service planning to 2031/32 and has an expected gross floor area in the range of 55,000 m^2 to 65,000 m^2, with a maximum planning envelope height of approximately RL 67.1 m.

The visual analysis undertaken for the Concept Proposal demonstrates that the main hospital building, to be developed and articulated within the proposed planning envelope, would generally be an obvious modification within the local visual environment when viewed from various viewpoints in the surrounding locality.

The assessment process demonstrates a reduction in the quality of view frames for all assessed visually sensitive receivers (VSRs) other than VIEW 5: Kingfisher Circuit (negligible). The most notable area impacted is the elevated residential area located east of the site including VIEW 1 McPhail Avenue, VIEW 1A Oceanview Crescent and VIEW 2 Dinsey Street (generally west-facing areas of Kingscliff Hill). It is likely that distant views of Mt Warning from some residences north of VIEW 1A Oceanview Crescent and VIEW 1 McPhail Avenue would be obstructed by the Project based on assessment of the Concept Proposal's maximum planning envelope; loss of the landmark view would be considered a high (scale 13) impact regarding the visual sensitivity of the Project. Pristine coastal views would not be impacted.

It is important to note that the assessment is based on a Concept Proposal and maximum planning envelope for the new hospital. This does not represent built form or actual massing, but rather the maximum envelope within which, through the detailed design process, the building and form would be developed and articulated. The envelope's anticipated zonal densities (see architectural concept plans) also indicate that final built form density would be articulated and reduce toward the upper levels of the envelope. Hence the maximum planning envelope represents a worst-case scenario. The detailed design response will develop and refine the building form, including massing, articulation and appearance of the building.

Based on the assessment of the Concept Proposal, an obvious change to the site and local landscape will occur and a reduction in visual quality of various view frames would be experienced, however all view frames would maintain a reasonable visual amenity standard. The most affected west-facing and elevated residential areas would also still retain appreciable distant views of natural landscape features, including bushland, hinterland and ranges, although some residences are likely to lose distant views of Mt Warning.

The draft KLP/DCP, Tweed Shire Scenic Landscape Evaluation (1995) and Visual Management System for NSW Coast, Tweed Pilot (2004) identify the Project Site and development area as being located within the northeast corner of the high scenic value area of the Cudgen district based on the mix of rural landscape contrasted by forested hills and generally with low capacity for change. The Project is located along the ridgeline extending towards Kingscliff Hill, at the rural/ urban interface, and would impact the scenic quality of the Cudgen District; particularly views west from Kingscliff Hill.

The envelope has been established based on the anticipated building typology and height of the hospital. As discussed in the Built Form and Urban Design Report appended to the EIS, the building arrangement which is undergoing design development would fit within the proposed maximum planning envelope and is expected to take the form of an IPU zone on podium (stacked typology) building arrangement. This reflects various design requirements for the Project including environmental constraints (e.g. flood, biodiversity, bushfire, geotechnical), utilising environmental efficiencies (solar access, ventilation, energy efficiency and amenity) and maximising operational circulation efficiencies both for patient safety and economies of movement and care that will benefit both patients and staff at the facility.

The planning envelope and building typology has also considered the visual impact on the landscape and local receivers (refer to the EIS and accompanying Built Form and Urban Design Report for further detail regarding design principles and measures considered to reduce the impact based on the Concept Proposal). Substantial setbacks from the site's boundaries and surrounding sensitive land uses are provided. The Concept Proposal also includes below ground levels to reduce height and integrates with the Project Site's topography to reduce visual impact. In this regard the main envelope and development zone is the triangular plateau within the Project Site. The hospital envelope has been located on the ridge edge at the deepest vertex of the triangular plateau. The design approach takes advantage of the ridge line, providing some floor levels below the main hospital entry level. This contributes to lowering the perceived height. Development and articulation of the built form within the envelope would occur during detailed design (Stage 2).

Furthermore, the vegetated environmental area and associated scenic amenities along the north of the Project Site, will be preserved to protect the environmental biodiversity and to provide views and amenity for the hospital. This also provides screening.

To enable the determination of the SSD application, DPE will prepare a new State Environmental Planning Policy that amends TLEP 2014 by rezoning part of the Project Site to 'SP2 Infrastructure' (which is currently zoned 'RU1 Primary Production' and 'R1 General Residential'), and removing any building height, Floor Space Ratio (FSR) and minimum lot size controls to be consistent with other hospital sites. As detailed above, and in the Built Form and Urban Design Report that accompanies the EIS, the Concept Proposal attempts to minimise impacts on the visual landscape of the Cudgen District by reducing height, providing increasing articulation and reducing density in the upper zones of the envelope (refer to zonal densities on the proposed plans), and presenting setbacks. The new SEPP would enable the Project to comply with the primary planning controls relevant to the site. The combination of amended planning controls, public benefit associated with the operation of the hospital within the region and design intent and measures to minimise the visual impact supports the reasonableness of the Project.

The visual assessment indicates that all assessed VSRs maintain view frame qualities in the medium rating range. The visual impact of the Project would be further considered in the design and Stage 2, including the development and incorporation of measures to assist in reducing or mitigating visual impact.

Recommendations regarding the mitigation of visual impact associated with the Project based on the Concept Proposal include:

- Development of a high-quality architectural design response, including articulated form, subject to further assessment at Stage 2.
- Materials and finishes associated with the development should be designed to be non-reflective and complimentary to surrounding natural colour palettes where possible.
- Outdoor lighting design and operation should be compliant with *AS4282 – Control of obtrusive effects of outdoor lighting*.
- Existing vegetation should be retained onsite where possible (refer to the proposed tree removal/ preservation plan and noting access point and sightline requirements) and further on-site landscaping opportunities investigated and developed (refer to concept landscape masterplan appended to the EIS) to improve visual amenity and potential screening of the development to mitigate impacts on sensitive visual receivers.

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Appendix A

VSR View Frame Montages

LEGEND

SITE BOUNDARY

A VIEW POINT LOCATION

N

DIMENSIONS

USE FIGURED DIMENSIONS. DO NOT SCALE. CONTRACTORS MUST VERIFY ALL DIMENSIONS ON THE SITE BEFORE COMMENCING ANY WORK OR MAKING ANY SHOP DRAWING WHICH MUST BE SUBMITTED AND REVIEWED BEFORE MANUFACTURE.

FIXTURES, FITTINGS & EQUIPMENT SPECIFICATIONS

SUBSTITUTE FF&E EQUIPMENT SPECIFICATIONS
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PROJECT MANAGER

TSA MANAGEMENT

CLIENT

NSW GOVERNMENT Health Infrastructure | Health Northern NSW Local Health District

PROJECT

TWEED VALLEY HOSPITAL
771 Cudgen Road, Cudgen

DRAWING TITLE

VIEWPOINT ANALYSIS
KEY PLAN

SCALE

NTS

DATE	DRAWN BY	CHECKED
19/09/2018	BS	MH

PROJECT No	DRAWING No	REVISION
10363	AR-SKE-53-200	00

VIEW 1: McPhail Avenue
Ground RL: +39.114 AHD
Camera Height RL: +40.514 AHD
Distance to Project Title Boundary: 220m

01/08/2018
Canon EOS 6D
24mm Focal Length

VIEW 1a: Oceanview Crescent
Ground RL: +35.844 AHD
Camera Height RL: +37.194 AHD
Distance to Project Title Boundary: 164m

01/08/2018
Canon EOS 6D
17mm Focal Length

VIEW 2: Dinsey Street
Ground RL: +44.310 AHD
Camera Height RL: +45.720 AHD
Distance to Project Title Boundary: 260m

01/08/2018
Canon EOS 6D
24mm Focal Length

VIEW 3: Guilfoyle Place
Ground RL: +15.323 AHD
Camera Height RL: +16.753 AHD
Distance to Project Title Boundary: 388m

01/08/2018
Canon EOS 6D
24mm Focal Length

LEGEND

MAXIMUM PLANNING ENVELOPE

N

DIMENSIONS

USE FIGURED DIMENSIONS. DO NOT SCALE. CONTRACTORS MUST VERIFY ALL DIMENSIONS ON THE SITE BEFORE COMMENCING ANY WORK OR MAKING ANY SHOP DRAWING WHICH MUST BE SUBMITTED AND REVIEWED BEFORE MANUFACTURE.

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DRAWING TITLE

VIEWPOINT ANALYSIS
STREET VIEWS (1 of 3)

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VIEW 4: Clarke Street
Ground RL: +26.493 AHD
Camera Height RL: +27.893 AHD
Distance to Project Title Boundary: 647m

01/08/2018
Canon EOS 6D
17mm Focal Length

VIEW 5: Kingfisher Circuit
Ground RL: +3.2997 AHD
Camera Height RL: +4.6747 AHD
Distance to Project Title Boundary: 231m
*Note: Hospital entirely obscured behind the environmental area beyond foreground houses

01/08/2018
Canon EOS 6D
24mm Focal Length

VIEW 5a: Bellbird Drive
Ground RL: +3.485 AHD
Camera Height RL: +4.855 AHD
Distance to Project Title Boundary: 448m

01/08/2018
Canon EOS 6D
17mm Focal Length

VIEW 6: Intersection Tweed Coast road and Cudgen Road
Ground RL: +15.554 AHD
Camera Height RL: +16.954 AHD
Distance to Project Title Boundary: 280m

01/08/2018
Canon EOS 6D
17mm Focal Length

LEGEND

MAXIMUM PLANNING ENVELOPE

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VIEWPOINT ANALYSIS
STREET VIEWS (2 of 3)

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VIEW 7: Cudgen Road
Ground RL: +26.2933 AHD
Camera Height RL: +27.6633 AHD
Distance to Project Title Boundary: 19 m

01/08/2018
Canon EOS 6D
17mm Focal Length

VIEW 8: Intersection of Cudgen Road and Turnock Street
Ground RL: +23.7595 AHD
Camera Height RL: +25.1295 AHD
Distance to Project Title Boundary: 38m

01/08/2018
Canon EOS 6D
17mm Focal Length

LEGEND

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