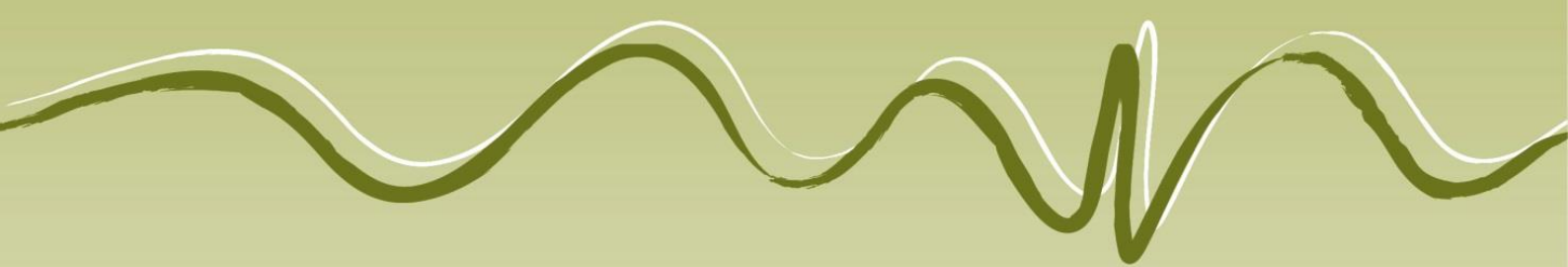


Response to Submissions Report

Tweed Valley Hospital



PO Box 119
Lennox Head NSW 2478
T 02 6687 7666

PO Box 1446
Coffs Harbour NSW 2450
T 02 6651 7666

PO Box 1267
Armidale NSW 2350
T 02 6772 0454

PO Box 229
Lismore NSW 2480
T 02 6621 6677

info@geolink.net.au

Prepared for: Health Infrastructure
© GeoLINK, 2019

<i>UPR</i>	<i>Description</i>	<i>Date Issued</i>	<i>Issued By</i>
2682-1140	Preliminary draft	21/12/2018	Jacob Sickinger
2682-1147	Second Issue	14/01/2019	Simon Waterworth
2682-1148	Third Issue	23/01/2019	Simon Waterworth
2682-1149	Fourth Issue	25/01/2019	Simon Waterworth

Table of Contents

1.	Introduction	1
1.1	Purpose of the Report	1
1.2	Summary of Government Agency Submissions	1
1.3	Summary of Public Submissions	1
1.4	Additional Consultation	3
1.5	Amendment to SSDA and Response to Submissions	3
1.6	Project Team Input	3
2.	Additional Consultation	5
2.1	Stakeholder Engagement	5
2.1.1	External Stakeholder Engagement	5
2.1.2	Government Department Consultation	5
2.1.3	Staff Engagement	5
2.2	Community Engagement	7
2.2.1	Online Engagement	7
2.2.2	Media Releases	8
2.2.3	Pop-Ups	8
2.2.4	Community Reference Panel	12
2.2.5	Publications	12
3.	Public Submissions	15
3.1	Introduction	15
3.1.1	Number of Submissions	15
3.1.2	Feedback Raised in Submissions	16
3.1.3	The Issue of Site Selection	18
3.1.4	Understanding the Clinical Services Planning Hierarchy	25
3.1.5	Changes and Additional Information as part of Submissions Report	27
3.1.6	Approach to Responding to Submissions	28
3.2	SEAR 1 Statutory Planning	29
3.2.1	Permissibility	29
3.2.2	Early and Enabling Works	43
3.3	SEAR 2 - Policies and Strategic Context	44
3.3.1	Hospital Study Area	47
3.4	SEAR 3 – Built Form and Urban Design	47
3.4.1	Site Layout	47
3.4.2	Construction Environmental Management Plan (CEMP) Comments	48
3.5	SEAR 4 - Environmental Amenity	48
3.5.1	Visual Impact and Amenity	48

<u>3.6</u>	<u>SEAR 5 – Staging</u>	<u>57</u>
<u>3.6.1</u>	<u>Cost</u>	<u>57</u>
<u>3.7</u>	<u>SEAR 6 - Agricultural Impact</u>	<u>58</u>
<u>3.7.1</u>	<u>The Loss of State Significant Farmland (SSF)</u>	<u>58</u>
<u>3.7.2</u>	<u>Land Use Conflict Risk Assessment (LUCRA)</u>	<u>60</u>
<u>3.7.3</u>	<u>Cumulative Impacts</u>	<u>64</u>
<u>3.8</u>	<u>SEAR 7 - Transport and Accessibility</u>	<u>65</u>
<u>3.8.1</u>	<u>Traffic Congestion/ Road Network</u>	<u>65</u>
<u>3.8.2</u>	<u>Intersection Upgrades</u>	<u>74</u>
<u>3.8.3</u>	<u>Regional Accessibility</u>	<u>75</u>
<u>3.8.4</u>	<u>Parking</u>	<u>76</u>
<u>3.8.5</u>	<u>Construction Stage Issues</u>	<u>78</u>
<u>3.9</u>	<u>SEAR 8 - Ecologically Sustainable Development</u>	<u>82</u>
<u>3.9.1</u>	<u>Site Selection – Intergenerational Equity</u>	<u>82</u>
<u>3.9.2</u>	<u>Scope of Report</u>	<u>82</u>
<u>3.10</u>	<u>SEAR 9 - Social and Economic Impacts</u>	<u>82</u>
<u>3.10.1</u>	<u>Site Selection</u>	<u>82</u>
<u>3.10.2</u>	<u>Impact on Tweed Heads</u>	<u>85</u>
<u>3.10.3</u>	<u>Impact on Kingscliff</u>	<u>90</u>
<u>3.10.4</u>	<u>Regional Considerations</u>	<u>99</u>
<u>3.10.5</u>	<u>Site Considerations</u>	<u>103</u>
<u>3.10.6</u>	<u>Consultation</u>	<u>103</u>
<u>3.11</u>	<u>SEAR 10 – Aboriginal Heritage and Historical Heritage</u>	<u>103</u>
<u>3.11.1</u>	<u>Farming History</u>	<u>104</u>
<u>3.11.2</u>	<u>South Sea Islander Heritage</u>	<u>104</u>
<u>3.12</u>	<u>SEAR 11 – Noise and Vibration</u>	<u>105</u>
<u>3.12.1</u>	<u>Noise and Amenity Impacts</u>	<u>105</u>
<u>3.12.2</u>	<u>Aviation Noise</u>	<u>105</u>
<u>3.12.3</u>	<u>CEMP Comments</u>	<u>106</u>
<u>3.13</u>	<u>SEAR 12 – Contamination</u>	<u>107</u>
<u>3.13.1</u>	<u>Agricultural Contamination</u>	<u>107</u>
<u>3.14</u>	<u>SEAR 13 – Utilities</u>	<u>109</u>
<u>3.14.1</u>	<u>Availability of Infrastructure</u>	<u>110</u>
<u>3.14.2</u>	<u>Water Supply and Management</u>	<u>111</u>
<u>3.14.3</u>	<u>Wastewater Treatment</u>	<u>112</u>
<u>3.14.4</u>	<u>Liquid Trade Waste</u>	<u>114</u>
<u>3.14.5</u>	<u>Septic Tank Locations</u>	<u>115</u>
<u>3.15</u>	<u>SEAR 14 - Water and Soils</u>	<u>115</u>
<u>3.15.1</u>	<u>CEMP Comments</u>	<u>115</u>

3.16	SEAR 15 – Contributions	116
3.17	SEAR 16 – Drainage	116
3.18	SEAR 17 – Flooding and Coastal Hazards	116
3.18.1	Extent of Assessment	116
3.18.2	Access during Flood Events	117
3.19	SEAR 18 – Bushfire	118
3.20	SEAR 19 – Biodiversity	119
3.20.1	Site Selection	119
3.20.2	Biodiversity Assessment Methodology (BAM)	120
3.20.3	Ecological Buffers	128
3.21	SEAR 20 – Waste	129
3.22	SEAR 21 – Community Engagement Strategy	129
3.22.1	Site Selection Consultation	129
3.23	SEAR 22 – Impact on Airspace	136
3.23.1	General Comments	136
3.23.2	Bird and Mammal Hazards	136
3.23.3	Aviation Noise – Impact on Residents	137
3.24	SEAR 23 – Underground Petroleum Storage System	138
4.	Government Submissions	139
4.1	Response Government Agency Submissions	139
4.2	Summary of government agency submissions	139
4.3	Response to issues raised in government agency submissions	140
4.4	Department of Planning and Environment – Statement of Key Issues	213
4.4.1	Key Issues	213
4.4.2	Other Matters	234
5.	Changes to the Project	238
5.1	Summary of Design and Plan Changes	238
5.1.1	Hospital Program Definition	239
5.1.2	Campus Master Plan Consolidation	239
5.1.3	Hospital Block and Stack Arrangement	240
5.1.4	Urban and Architectural Design Response	241
5.1.5	Place Making	241
5.1.6	Stormwater and Sediment Basin Reconfiguration	242
5.1.7	Nature of Changes	242
5.2	Concept Proposal: Tweed Coast Road/Cudgen Road Intersection Upgrade	243
5.3	Additional Stage 1 Works: Description of Site Access and Associated Road Works	243
5.3.1	New Site Accesses and Turnock Street Roundabout Improvements	244
5.3.2	Work Methodology	244
5.3.3	Construction Hours	245
5.3.4	Earthworks	245

5.3.5	Source and Quantity of Materials	245
5.3.6	Traffic Management and Access	245
5.3.7	Ancillary Facilities	246
5.4	Revised Construction Hours	246
5.5	Remediation Works in Stage 1 Scope	246
5.6	Other Matters	247

6. Additional Assessment 248

6.1	Concept Assessment of Tweed Coast Road/Cudgen Road Intersection Upgrade	248
6.1.1	SEAR 1 Statutory Planning	248
6.1.2	SEAR 2 - Policies and Strategic Context	250
6.1.3	SEAR 3 - Built Form and Urban Design	250
6.1.4	SEAR 4 – Environmental Amenity	250
6.1.5	SEAR 5 - Staging	251
6.1.6	SEAR 6 – Agricultural Impact	251
6.1.7	SEAR 7 – Transport and Accessibility	251
6.1.8	SEAR 8 – Ecologically Sustainable Development	251
6.1.9	SEAR 9 – Social and Economic	252
6.1.10	SEAR 10 – Aboriginal Heritage	253
6.1.11	SEAR 11 – Noise and Vibration	253
6.1.12	SEAR 12 – Contamination	254
6.1.13	SEAR 13 – Utilities	254
6.1.14	SEAR 14 – Water and Soils	254
6.1.15	SEAR 15 – Contributions	255
6.1.16	SEAR 16 - Drainage	255
6.1.17	SEAR 17 – Flooding and Coastal Hazards	255
6.1.18	SEAR 18 – Bush Fire	255
6.1.19	SEAR 19 – Biodiversity	255
6.1.20	SEAR 20 - Waste	256
6.1.21	SEAR 21 – Community Engagement Strategy	256
6.1.22	SEAR 22 – Impact on Airspace	256
6.1.23	SEAR 23 – Underground Petroleum Storage	257
6.1.24	Historical (Non-Aboriginal) Heritage	257
6.2	Assessment of Additional Stage 1 Works – Site Accesses and Associated Road Works	258
6.2.1	SEAR 1 – Bulk Earthworks	259
6.2.2	SEAR 2 – Site Office Details	259
6.2.3	SEAR 3 – Transport and Accessibility	259
6.2.4	SEAR 4 – Noise and Vibration	263
6.2.5	SEAR 5 – Sediment, Erosion and Dust Control	266
6.2.6	SEAR 6 – Contamination	267
6.2.7	SEAR 7 – Ecologically Sustainable Development	267
6.2.8	SEAR 8 – Biodiversity Assessment	268
6.2.9	SEAR 9 – Aboriginal Heritage	268
6.2.10	SEAR 10 – Acid Sulfate Soil	268
6.2.11	SEAR 11 - Drainage	269
6.2.12	SEAR 12 - Waste	270

6.2.13	SEAR 13 Construction Hours	270
6.2.14	Historical (Non-Aboriginal) Heritage	271
6.3	Site Contamination and Remediation	272
6.4	Biodiversity Additional Information	274
6.4.1	Revised Biodiversity Development Assessment Report (BDAR)	274
6.4.2	Matters of National Environmental Significance	275
6.5	Separate Preliminary Works and Potential Cumulative Impact	277

Tables

Table 1-1	Project Team and Responsibilities	3
Table 2-1	Pop-Ups locations and community actively engaged	9
Table 2-2	EIS related commentary received at Pop-Ups	10
Table 2-3	General project commentary received at Pop-Ups	11
Table 4-1	Response to Government Agency Submissions	140
Table 4-2	Response to Council Submission	171

Figures

Figure 3-1	Submissions by response type	15
Figure 3-2	Submissions by location	16
Figure 3-3	Submissions per EIS area	18
Figure 3-4	Sentiment regarding statutory planning	19
Figure 3-5	Key issues raised regarding statutory planning	19
Figure 6.1	Coastal Wetlands and Proximity Map (CM SEPP)	250
Figure 6.2	TLEP 2014 Heritage Map	257
Figure 6.3	Indicative Additional Stage 1 Works Locations (identified as 1 & 2) in relation to noise-sensitive receives	263
Figure 6.4	TLEP 2014 ASS mapping (<i>DPE Online Mapping</i>)	269
Figure 6.5	Historical Heritage Assessment Survey Results (Niche 2018)	271

Appendices

Appendix A	Submissions Coding Framework
Appendix B	Updated Project Plans
Appendix C	Updated Survey
Appendix D	Architectural and Urban Design Response
Appendix E	Biodiversity Response and Additional Information
Appendix F	Contamination Response
Appendix G	Civil Engineering Response
Appendix H	Heritage Response
Appendix I	Hydraulic and Fire Services Response
Appendix J	Agriculture Response
Appendix K	Land Use Conflict Risk Assessment Response
Appendix L	Noise and Vibration Response
Appendix M	Social and Economic Response
Appendix N	Traffic and Transport Response
Appendix O	Waste Management and Other Responses
Appendix P	Electrical and Underground Petroleum Response

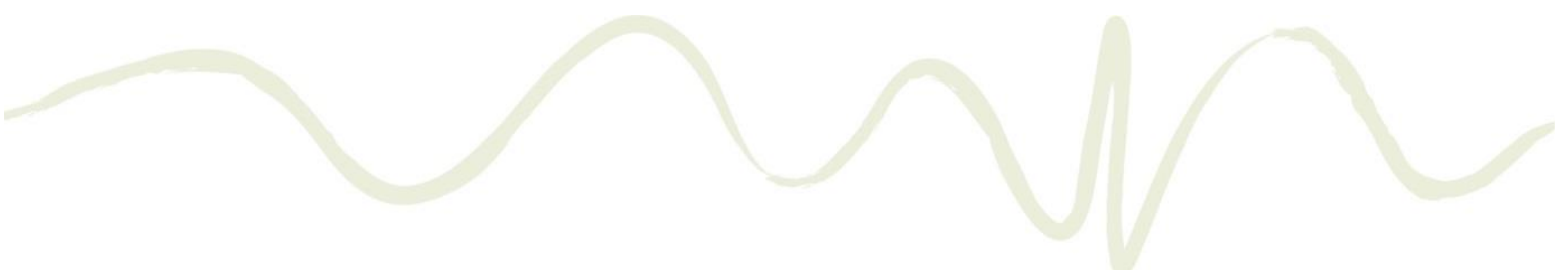


Appendix Q Aviation Response

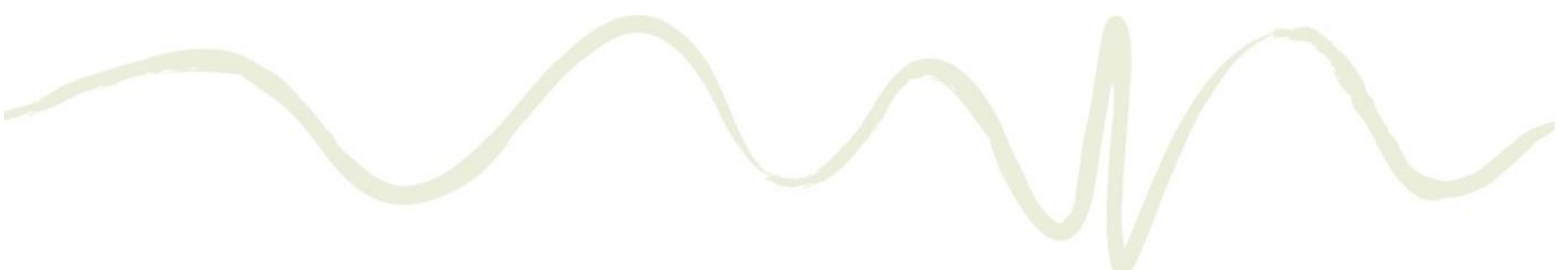
Appendix R Additional Geotechnical Investigations

Glossary of terms and acronyms

Term	Description/ Definition
Aboriginal Heritage Information Management System (AHIMS)	This holds information about Aboriginal objects, Aboriginal places with special significance with respect to Aboriginal culture, and archaeological reports.
Acid Sulphate soils (ASS)	Naturally acid clays, mud and other sediments usually found in swamps and estuaries. They may become extremely acidic when drained and exposed to oxygen and may produce acidic leachate and runoff that can pollute receiving waters and liberate toxins. ASS are classified as materials which are above the groundwater, are undergoing oxidation and have a pH of less than 4.0.
Amenity	The degree of pleasantness of an area or place.
Annual average daily traffic (AADT)	The total traffic in both directions at a specified location calculated from mechanically obtained axle counts.
Annual Exceedance Probability (AEP)	The chance of a flood of a given size (or larger) occurring in any one year, usually expressed as a percentage. For example, if a peak flood discharge of 500 m ³ /s has an AEP of 5%, it means that there is a 5% chance (i.e. a 1 in 20 chance) of a peak discharge of 500 m ³ /s (or larger) occurring in any one year (see also Average Recurrence Interval).
Archaeological site	A site with any material evidence of past Aboriginal activity that remains within a context or place that can be reliably related to that activity.
Australian height datum (AHD)	The standard reference level used to express the relative height of various features. A height given in metres AHD is essentially the height above sea level.
BAM	Biodiversity Assessment Methodology
BC Act	NSW <i>Biodiversity Conservation Act 2016</i>
BDAR	Biodiversity Development Assessment Report
Catchment	The area drained by a stream or body of water, or the area of land from which water is collected.
CBD	Central Business District
CEMP	Construction Environmental Management Plan
CIV	Capital investment value
Concept Development Application	A development application that sets out concept proposals for the development of a site, and for which detailed proposals for the site or for separate parts of the site are to be the subject of a subsequent development application or applications
Concept Proposal	Initial functional layout of a concept, such as a building, to provide a level of understanding to later establish detailed design parameters.
Council	Tweed Shire Council
CPTED	Crime Prevention Through Environmental Design Principles
CTMP	Construction Traffic Management Plan
Culvert	An enclosed channel for conveying a stream below a road.
dBA	Decibels using the A-weighted scale. Decibels are used to measure sound levels. dBA measures loudness according to the human perception of sound.
Decibel	Decibels are used to measure sound levels.
DPC	Department of Premier and Cabinet



Term	Description/ Definition
Earthworks	The process of extracting, moving and depositing earth during construction.
Ecologically sustainable development (ESD)	Using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained and the total quality of life, now and in the future, can be increased. ESD incorporates four key principles: <ul style="list-style-type: none"> ■ the precautionary principle ■ inter-generational equity ■ conservation of biological diversity and ecological integrity ■ improved valuation and pricing of environmental resources.
EDT	Estimated Driving Time
EIS	Environmental impact statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>
EPI	Environmental Planning Instrument
Flood immunity	Relates to the level at which a particular structure would be clear of a certain flood event.
FSR	Floor Space Ratio
GCUH	Gold Coast University Hospital
Geotechnical	Application of the methods of engineering and science to construction that involves natural soil and rock materials.
Grade/ gradient	Slope or steepness
Habitat	The place where an organism lives. Habitats are measurable and can be described by their flora and physical components.
Health and Education Campus	A site that allows health and education providers to collaborate, share resources and grow to their mutual benefit and benefit the community.
HI	New South Wales Health Infrastructure
HLS	Helicopter Landing Site
IPU	In Patient Unit
KLP	Kingscliff Locality Plan (exhibition draft)
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
Longitudinal section or 'long section'	The section drawn along the length of the route showing vertical elevation.
NCRP 2036	North Coast Regional Plan 2036
OEH	Office of Environment and Heritage
Project	Development of a new hospital on a greenfield site in the Tweed, referred to as the Tweed Valley Hospital.
Project Site	The location of The Project, on a portion of 771 Cudgen Road, Cudgen, legally described as Lot 11 DP 1246853. The Project Site and surrounding land that is potentially affected by the Project, including external infrastructure works/upgrades.
REDS	Regional Economic Development Strategy (referring specifically to the new Tweed Council doc)
RL	Reduced Level



Term	Description/ Definition
RMS	Roads and Maritime Service
SEIA	Social and Economic Impact Assessment
SEPP	State Environmental Planning Policy
SIDRA	Signalised and un-signalised Design and Research Aid
SRD SEPP	State Environmental Planning Policy (State and Regional Development) 2011
SSD	State Significant Development
SSDA	State Significant Development Application
SSF	State Significant Farmland
TfNSW	Transport for New South Wales
Threatened ecological community (TEC)	An ecological community identified by relevant legislation as having endangered status under the NSW <i>Biodiversity Conservation Act 2016</i> or the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
Threatened species	Animals or plants listed as endangered or vulnerable under the NSW <i>Biodiversity Conservation Act 2016</i> or the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
TLEP	Tweed Local Environmental Plan (maybe as a clarification under the definition of LEP)
TRAC Kingscliff	Tweed Regional Aquatic Centres (used to refer to the pool, particularly by Bitzios)
TRDS	Tweed Road Development Strategy
TSTM	Tweed Strategic Transport Model
TTH	The (existing) Tweed Hospital at 14-34 Powell Street (Lot 628 DP755740), Tweed Heads on the far north coast of NSW
VIA	Visual Impact Assessment
VSR	Visually Sensitive Receiver



1. Introduction

1.1 Purpose of the Report

This Response to Submissions Report (Submissions Report) has been prepared following the public exhibition of the State Significant Development Application (SSDA) number SSD 18_9575 for the new Tweed Valley Hospital to be located at 771 Cudgen Road, Cudgen NSW (the Project). The SSDA, including the associated Environmental Impact Statement (EIS), was placed on public exhibition for an extended period by the NSW Department of Planning and Environment (DPE) from 1 November 2018 until 13 December 2018.

The SSDA and supporting EIS referred to the Project Site (a 19.4 ha area of land) as part of the former single Lot 102 DP 870722, located at 771 Cudgen Road, Cudgen. The Project Site has now been formally acquired and is owned by Health Administration Corporation (HAC). The Project Site is now legally described as Lot 11 DP 1246853 which has an area of 19.38 ha. An updated Plan of Survey is attached to **Appendix O**.

1.2 Summary of Government Agency Submissions

Submissions on the SSDA were received from the following government agencies:

Federal Government

- Civil Aviation Safety Authority (CASA)
- Airservices Australia.

State Government

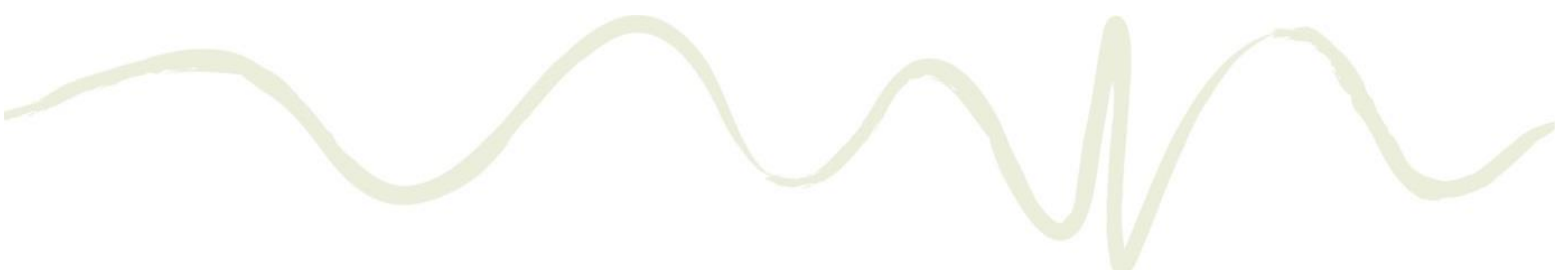
- Department of Industry - Water and Natural Resources Access Regulator
- Department of Industry – Lands and Water Division (Primary Industries – Agriculture)
- Water NSW
- Environment Protection Authority (EPA)
- Office of Environment and Heritage (OEH)
- Heritage Council of NSW
- Rural Fire Service (RFS)
- Roads and Maritime Service (RMS)
- Transport for New South Wales (TfNSW)
- DPE - Government Architect NSW (GA NSW).

Local Government and Other

- Tweed Shire Council (TSC)
- Gold Coast Airport.

1.3 Summary of Public Submissions

431 public submissions (including 425 individual, three organisation and two company) were received to the SSDA, comprising of 6% in support, 91% objections and 3% providing comments only.



For the 6% of submissions in support of the SSD Application, feedback mostly focused on support for the hospital in general, challenges to the productivity of the existing farmland and for the government to 'just get on with it'.

The key issues the submissions objecting to the SSDA can be categorised into the following themes:

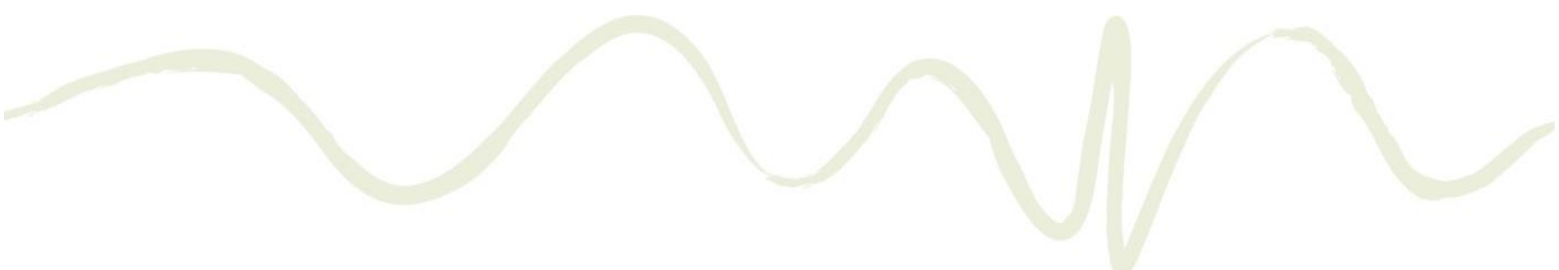
- Statutory planning
- Social and economic impacts
- Agricultural impacts
- Policies and context
- Transport and accessibility
- Community engagement
- Flooding and coastal hazards
- Environmental amenity
- Noise and vibration
- Staging
- Biodiversity
- Built form and urban design
- Stage 1 works
- Impact on airspace
- Water and soils
- Ecologically sustainable development
- Waste
- Aboriginal heritage
- Drainage
- Contamination
- Bushfire
- Non-Aboriginal heritage
- Utilities

Health Infrastructure, as proponent of the Project, also received a statement of Key Issues and Other Matters from the DPE. The key issues identified by the DPE relate to:

- The Concept Building Envelope
- Visual Impact
- Cut and fill and retaining walls
- Land Use and Offsets
- Noise Assessment
- Social Impact Assessment
- Traffic Assessment
- Air Quality.

Other matters raised by DPE relate to clarification of:

- Site Area
- Sediment Basins
- Replacement Planting
- Construction Jobs
- Capital Investment Value
- Site Contamination
- REF and Upgrade works.



These issues/matters raised by DPE have been considered and addressed within **Section 4.4** of this Submissions Report.

1.4 Additional Consultation

Given the importance of the Project to the Northern New South Wales Local Health District (NNSW LHD) and the amount of public interest and submissions on the SSDA, Health Infrastructure conducted additional community information sessions to address community concerns and to better inform the public on the Project. Further engagement has occurred with, including a summary of the EIS content provided via a presentation to, relevant government agencies, Council Reference Group, Community Reference Panel and LHD staff. There have also been ongoing cross-agency government meetings to facilitate engagement and collaboration with a range of State agencies and Council. This additional consultation is also discussed in this Submissions Report (refer **Section 2**).

1.5 Amendment to SSDA and Response to Submissions

Health Infrastructure and its consultants have reviewed and considered all of the issues raised within the public and government agency submissions on the SSDA, including matters raised through additional consultation on the Project. Changes have been made to the Project. These changes are a result of ongoing design refinement and in response to feedback received from government agencies and the community during the public exhibition and consultation phase of the SSDA (refer **Section 5**).

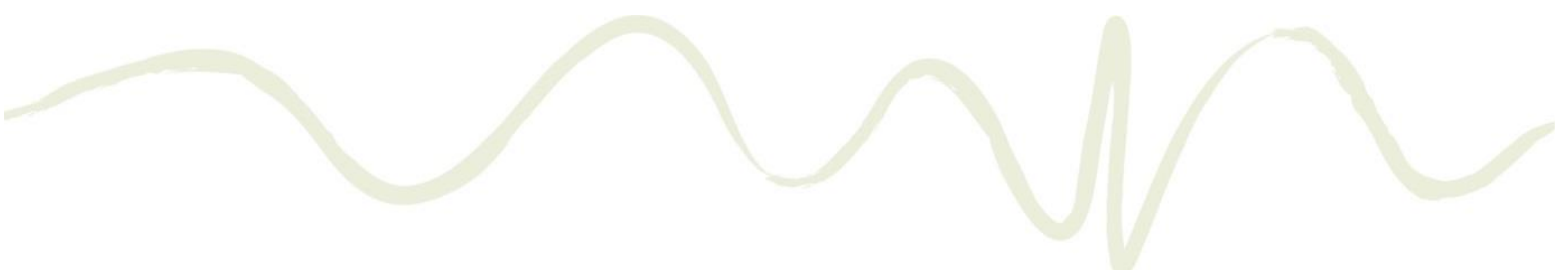
In accordance with clause 85A of the *Environmental Planning and Assessment Regulation 2000* (NSW) (EP&A Regulation), this Submissions Report sets out the proponent's response to each of the issues raised in relation to the Project and amends the SSDA, where necessary.

1.6 Project Team Input

This Submissions Report has been prepared for Health Infrastructure with input and assistance of a comprehensive project team. The project team and their responsibilities are outlined in **Table 1.1** below.

Table 1-1 Project Team and Responsibilities

Name	Role/Responsibility
Health Infrastructure	Proponent and Project Director
Northern NSW Local Health District	Health Service Planning
TSA Management	Project Manager
STH + Bates Smart	Architects
Turf Design	Landscape Architects
GeoLINK	Town Planners
Bonacci	Site/ Civil and Structural Engineers
Acor	Hydraulics and Service Engineering
Acoustic Studio	Acoustics Consultant
Altus Group	Cost Manager
ARC	Agronomy and Agricultural Impact Consultants
Arup	Electrical Engineering
AviPro	Aviation Consultant



Name	Role/Responsibility
B&P Surveys	Surveyor
Bitzios	Traffic Engineers
BMT	Flooding Consultant
Greencap and Land and Fire Assessments	Ecology and Bush Fire
Morrison Geotechnic	Geotechnical
Niche	Heritage and Archaeology
SGS Economics & Planning	Social and Economic Assessment
Steensen Varming	Mechanical Engineering and Ecological Sustainable Development Consultant
Tim Fitzroy and Associates	Rural Land Use Conflict
OCTIEF	Contamination
ArborSafe	Arboriculture
Dr Stephanie Clark	Biodiversity Assessment (Mitchell's Rainforest Snail)
Dr David Robertson	Biodiversity Peer Review (BDAR and MNES)



2. Additional Consultation

Following submission of the SSDA, additional consultation has been undertaken by Health Infrastructure.

This additional consultation, along with the public and government agency submissions on the SSDA, has shaped the proposed revisions to the SSDA contained in this Submissions Report. Health Infrastructure will continue to consult with relevant government agencies, other stakeholder groups, and the community through the ongoing planning, development and construction of the Project.

This section outlines the additional consultation undertaken by HI following submission of the SSDA.

2.1 Stakeholder Engagement

2.1.1 External Stakeholder Engagement

Stakeholder engagement on the project is ongoing, with the following key stakeholder engagement occurring following lodgment of the SSDA/EIS:

- Briefing of local businesses held on 15 November 2018 in relation to work packages available as part of the preliminary works.
- Attendance and information stand at the NNSW LHD Community Engagement Conference.
- Three rounds of Community Reference Panel meetings (refer Section 2.3.4 for details)

2.1.2 Government Department Consultation

- Council Technical Working Group meeting on 3 December 2018.
- Cross Government Working Group meetings in November 2018, December 2018 and January 2019.

2.1.3 Staff Engagement

In the period following lodgment of the SSDA, the following direct staff engagement was undertaken:

2.1.3.1 Staff Forums

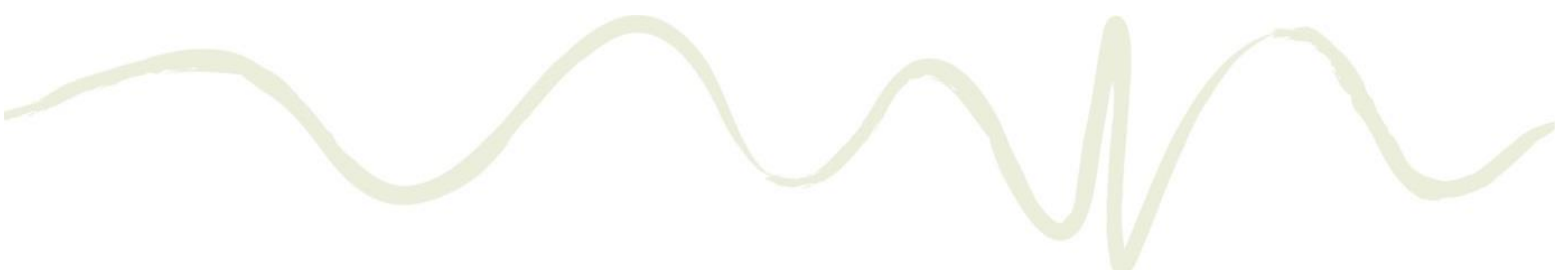
The following staff forums were held:

- 20 November 2018 – The Tweed Heads Hospital
- 23 November 2018 – Murwillumbah District Hospital

2.1.3.2 Newsletters

The following newsletters were issued:

- InTouch Special Edition, 31 October 2018, clarifying:
 - That the hospital is not planned to be larger than Gold Coast University Hospital (GCUH).
 - That plans are in place to manage traffic growth associated with the hospital.

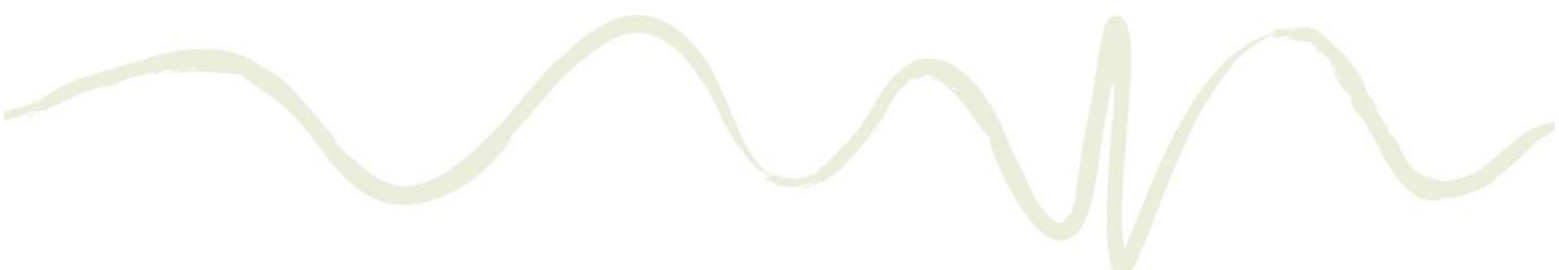
- 
- That the proposed height of the building will not create a precedent for other development in the area.
 - That the hospital is not underfunded and will provide a comprehensive range of free public healthcare services to the Tweed-Byron catchment.
 - That the hospital will not be a public-private partnership.
 - The status and future of the Kingscliff Locality Plan.
 - The extent of consultation in relation to site selection.
 - How the project will contribute to road upgrades in the region.
 - Why the existing Tweed Hospital site is not suitable for redevelopment.
 - That the artist's impression of the buildings published through A Current Affair was not prepared by the project team, and online does not represent the planning for the project.
- Holding works newsletter – 15 November 2018.
 - InTouch Special Edition – 19 December 2018, clarifying:
 - That there is sufficient budget to deliver the hospital.
 - That the number of staff and vehicles associated with the development have been assessed as part of the EIS.
 - That ambulance noise will be kept to a minimum, in accordance with NSW Ambulance guidelines.
 - That Tweed Valley Hospital will not be a tertiary level trauma hospital, and as such helicopter movements will be kept to a minimum.
 - That the site acquisition occurred in accordance with the publicly advertised Expression Interest Process, and subsequent compulsory acquisition in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*.
 - That the planning process has followed the appropriate process, noting the urgent need for health services in the region.
 - That the proposed rezoning will be specific to the site and will not create a precedent allowing development of other SSF in the region.
 - That the hospital will deliver a range of health services, with appropriate design and security arrangement to reduce opportunities for crime and incivility.
 - Holding works newsletter – 18 December 2018.
 - Standard Staff Newsletter – 20 December 2018.
 - InTouch special edition, published 9 January 2019, clarifying the impact of the proposal on the Flying Fox populations in Tweed.

2.1.3.3 Staff Interviews

In November 2018, Elton Consulting was appointed to further explore staff aspirations in relation to the new major referral hospital to be located at 771 Cudgen Road, opposite Kingscliff TAFE. The research aimed to understand:

- Staff experiences of the existing Tweed Hospital as a work place - what works and what does not work.
- Aspirations for the new Tweed Valley Hospital – what facilities and amenities would improve the hospital as a work place.
- How facilities and amenities are accessed, including shopping, transport, child and elder care – and how will working at the new Tweed Valley Hospital change this.

Data was collected from staff through a qualitative interview process, incorporating quantitative data collection through focussed questions.



Interviews were conducted at The Tweed Hospital on Thursday, 30 November 2018, Friday, 31 November 2018 and Tuesday, 4 December 2018. Interviews were conducted with staff taking part in Project User Groups on Tuesday, 4 December 2018, at the Tweed Valley Hospital Integrated Project Office.

Interviews at The Tweed Hospital were held:

- Within the cafeteria.
- Within the courtyard area opposite the cafeteria.
- Through direct approach of staff elsewhere in the hospital.

The variety of locations and time of day allowed for a range of staff to be captured, including those that utilise and do not utilise the cafeteria and those that work on a shift based roster. A total of 51 staff were interviewed, across a broad range of services areas, including:

- Surgical
- Pharmacy
- Mental Health
- Drugs and Alcohol
- Nursing
- Security
- Cafeteria / catering
- Specialists
- Students (Southern Cross University and Griffith University).
- Chaplains
- Cleaning / orderly.

A summary report was prepared, and is appended to the updated Social and Economic Impact Assessment at **Appendix M**.

2.2 Community Engagement

2.2.1 Online Engagement

The following website statistics outline engagement reached during November 2018:

- 1,700 users: 75.6% new; 24.4% returning
- 2,232 sessions: 1.31 sessions per user; 02:11 average duration
- 49.35% via desktop; 37.12% via mobile; 13.53% tablet
- 46.6% organic search; 0.7% referral; 18.9% social; 33.7% direct
- Top five pages: Our Staff; Latest News; Fact sheets; Reports; Project Overview

The following website statistics outline engagement reached during December 2018:

- 1,263 users: 83.9 new; 16.1% returning
- 1,714 sessions: 1.36 sessions per user; 02:51 average duration
- 46.5% via desktop; 42.8% via mobile; 10.7% tablet
- 49.1% organic search; 25.7% social; 24.7% direct
- Top five pages: Latest News; Project Overview; Our Architect; Site Overview; How to build a hospital



2.2.2 Media Releases

One media release was issued, dated 23 November 2018, outlining local business benefits arising from sub-contractor work, including demolition of structures, and site remediation works.

2.2.3 Pop-Ups

2.2.3.1 Purpose of Consultation

The purpose of this round of consultation was to inform community members of the release of the Environmental Impact Statement (EIS) by the Department of Planning and Environment (DPE) and provide information on where to access the EIS, what topics were contained and how to participate including how to provide a submission. A series of pop-up information booths were held around the region.

2.2.3.2 When, how and where was the consultation delivered?

The consultation process aimed to provide information to a broad spectrum of the community. Pop-up events were focused to provide information on how to participate in the DPE EIS process to all geographic areas within the region, across all age ranges, at varying times of day through the week and also weekends. This approach ensured the wider community who would utilise and possibly be impacted by the hospital, had the ability to be informed about the EIS release and process at a time and place that was convenient.

Information was provided from 24 October to 4 November 2018 through a number of pop-up displays with supporting factsheets on the planning process, EIS and general Tweed Valley Hospital information to drive participation in the formal DPE EIS process.

Two factsheets were produced and distributed at the pop-ups to provide information to community members on the planning approval process and the EIS. Updated copies of the four-page project brochure utilised in previous rounds of consultation were also available.

Consultation extended to all population centres within the Tweed Region including Tweed Heads, Cudgen, Kingscliff, Pottsville, Murwillumbah and Byron Bay.

2.2.3.3 Number of Pop-Ups and Community Reach

To ensure that pop-ups were genuine, and that those who were engaging were already at a time and a place suitable to them, the time and location of pop-ups were not advertised. This is consistent with previous rounds of engagement. 14 pop-ups were held across 11 days, reaching a total of 318 people.

In total, 318 community members were engaged with robust discussions occurring and a number of key themes raised with the project team. Additional individuals stopped to read the information and collect copies of the factsheet but did not actively engage with the consultation team and are not subsequently included in the figure.

Table 2-1 outlines all the pop-ups held during the consultation period, including numbers of people actively engaged.

Table 2-1 Pop-Ups locations and community actively engaged

Pop-Up Date	Location	Time	Number of People Actively Engaged
Wednesday, 24 October 2018	Kingscliff Shopping Village	10.00 am to 1:30 pm	30
Thursday, 25 October 2018	Tweed Hospital Reception	9.00 am to 11.00 am	5
Friday, 26 October 2018	Tweed City	12.00 pm to 3.00 pm	53
Sunday, 28 October 2018	Murwillumbah Showground Markets	7.00 am to 11.00 am	16
Monday, 29 October 2018	Tweed City	11.00 am to 3:30 pm	56
Tuesday, 30 October 2018	Tweed Mall	11.00 am to 2.00 pm	29
Wednesday, 31 October 2018	Murwillumbah Farmers Market Murwillumbah Hospital Reception	7.00 am to 11.00 am 12.00 pm to 2.00 pm	22 7
Thursday, 1 November 2018	Byron Bay Farmers Market Byron Hospital Reception	8.00 am to 11.00 am 12.00 pm – 2.00 pm	9 3
Friday, 2 November 2018	Kingscliff Shopping Village Kingscliff Night Markets	2:45 pm to 4.15 pm 4:30 pm to 8.00 pm	18 10
Saturday, 3 November 2018	Uki Farmers Market	7:30 am to 12.00 pm	18
Sunday, 4 November 2018	Pottsville Markets	7.00 am to 12.00 pm	42
TOTAL			318

2.2.3.4 Consultation Outcomes

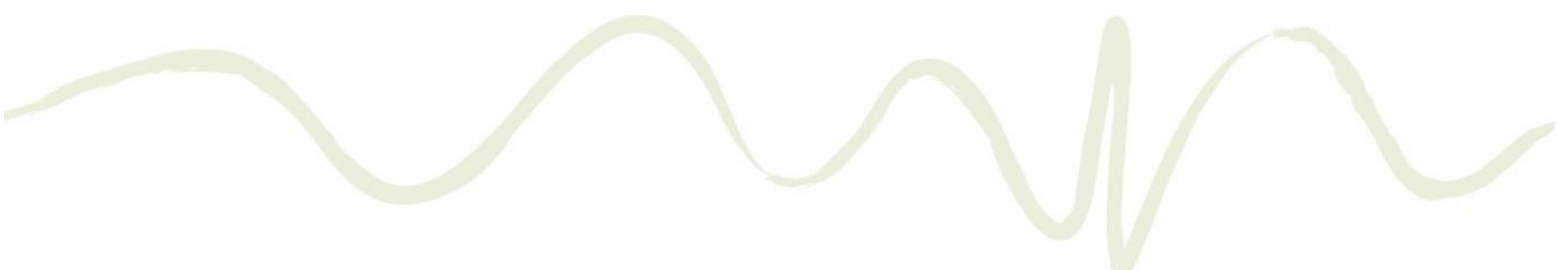
Table 2-2 outlines the key themes of commentary relating specifically to the EIS raised during pop-ups. Table 2-3 outlines the key themes of general project commentary raised during pop-ups.

The commentary below is what was offered by community. Commentary has been combined into these key themes and does not reflect the quantity each theme was raised, nor priority of the theme compared to others.

It is important to note that, throughout consultation, feedback was not actively sought and that misinformation on a range of topics was apparent through the provision of information. The EIS release provides an opportunity to provide facts which counter misinformation and inform submissions to DPE, which will help with the delivery of better outcomes for the community as a result of the formal process.

Table 2-2 EIS related commentary received at Pop-Ups

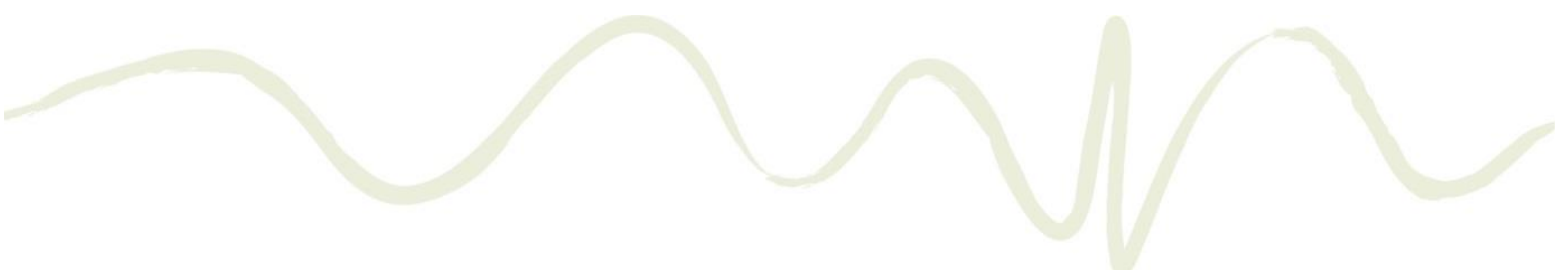
Theme	Key commentary
Traffic/Transport	<ul style="list-style-type: none"> ■ Concern for residents needing to travel through to Kingscliff from various locations within the region including driving on the motorway and on Tweed Coast Road. ■ Concerned that roads are not being raised when perception is that they will need to be because of flooding, to guarantee access. ■ Traffic and transport can't/won't cope with the hospital in place because of the additional traffic volume for an already congested Kingscliff. ■ Public transport is essential with concerns raised from those who use public transport that it isn't currently accessible or frequent, with comments including 'we won't be able to get to it, we don't drive', particularly relevant for residents of Tweed Heads who live within close proximity to the existing hospital who will now have to travel and pay for it. ■ Commentary surrounding the cost of parking and opportunities to have a mix of parking options including time limited free parking. ■ Community transport should be part of the consideration for access to and from the region, not just public transport as some people have accessibility challenges.
Social impact	<ul style="list-style-type: none"> ■ Concerns for a precedent being set by hospital, enabling the whole area to be developed including farmland, which will fundamentally change the social make up of Kingscliff. Additional to this is the precedent in which the three-storey height limit would be removed, effectively changing the character of the town and area. ■ Concerns for safety were raised because those seeking treatment (mental health/drug addicts) at the hospital would have access to Kingscliff and its beaches. ■ Concerns regarding loss of tourism or tourism impact because of the proximity of the hospital to the town.
Engagement	<ul style="list-style-type: none"> ■ Commentary surrounding "feels this is a glossy PR move and not genuine engagement or consultation on the EIS". ■ Sentiment that politicians are not listening; the hospital is not wanted. Engagement means listening and then acting on what is heard not just listening and ignoring. ■ Concerns that local politicians/Government are failing locals by supporting this and pushing this hospital through the process so quickly. ■ Language used makes it seem like a fait accompli without due process. ■ Concern and perceptions were raised surrounding "it's a done deal, why bother writing in". ■ The Government has been giving out good information and feels the transparency is there. ■ Glad that there is the "other side" at the markets to answer questions (Tweed Valley Hospital team referenced as the other side).
Process	<ul style="list-style-type: none"> ■ Commentary and concerns about the EIS process not being transparent or fair. "The Government will find consultants who will create 'reasons' for the project to proceed". ■ Commentary and general questions about the SSDA process including what approvals are required moving forward. ■ Commentary on it "Not being fair to ask individuals who are not technically minded to provide useful and meaningful comment. Additionally, frustrations were raised that it's not the community's job to do this nor is it their job to provide alternates".



Theme	Key commentary
	<ul style="list-style-type: none"> Concerns around the data used to inform the EIS and if the traffic study has been undertaken with the current traffic situation e.g. road and traffic counts in 2018 rather than using pre-existing data from 2016.

Table 2-3 General project commentary received at Pop-Ups

Theme	Commentary
Site and location	<ul style="list-style-type: none"> Support for the hospital on that site, it will be a great opportunity and good for the nature reserve instead of farming, happy to see something happening with the site. Great idea, site is good, great to have it above flood levels. Hospital should remain at existing site and be built up or expanded onto the bowls club land. Residents purchased land in Tweed to be near the Tweed Hospital. Doesn't think the site will be big enough for future growth of the Hospital. Against the site, shouldn't be on farmland and concerned for the loss of farmland. An EIS should have happened prior to the section of the site. Don't believe the flooding requirement to be above the PMF. Concern for farmland being built over, social impact should include loss of farmland as well as jobs and business. A hospital on the site will place strain on an already tight housing market. Feels that housing and infrastructure in Kingscliff isn't enough to support population.
Concept of a Hospital	<ul style="list-style-type: none"> Support for the hospital, need to get building it as soon as possible. Don't let the vocal minority prevent it because of a silent majority. Job creation is good, you won't get consensus and if the hospital was removed the community would still jump up and down. Not everyone can be kept happy. Glad they're starting now before the election and that the decision can't be undone. It will be a great opportunity for educational placements and the region.
Services	<ul style="list-style-type: none"> Support for site and the hospital, increased services are fantastic for the community. Concerned Tweed and Murwillumbah hospitals will close and that elderly won't have access to these facilities. Concerns there is a lack of detail about what services are staying or going within Tweed Heads including commentary surrounding "wants to protest the choice to move a hospital from Tweed. People moved to the area for the hospital. Access and driving are a challenge for older residents". Services are needed now, Tweed ED is a joke and people need access to healthcare. Mental health should be included in the services provided and within the building itself. Support for vascular surgery option. Medical system doesn't serve the people. Concerns there is a gap in the discharge process/transport process for the elderly who live alone e.g. taxi home from the hospital with no support at home.



Theme	Commentary
General	<ul style="list-style-type: none"> ■ Concern the Tweed Hospital Auxiliary won't exist at the new hospital because existing members of the Tweed Hospital Auxiliary won't travel or be able to get to the new hospital ■ It's a very divisive community issue but a hospital is needed. ■ Concerns about the decision making/approvals process including misinformation on Council's role with commentary received around "will council even approve this?" ■ Hospital needs to be located near Tweed CBD for access to goods and services e.g. purchase of food, clothing for patients. Tweed Hospital is near Tweed CBD and Mall so you can shop there and buy what patients need. Kingscliff doesn't have this option. ■ Still doesn't understand why decision was made to move the hospital. ■ Political interference is rife in the debate between community, Tweed Hospital staff are brilliant, pressure is on them, but they do a great job. Would like to see something done with the Tweed Hospital site for the elderly such as aged care. ■ Rumours and misinformation are rife, don't know what the facts are. ■ A package of works which are community oriented and highlight benefits such as connectivity is needed as part of the hospital build.

2.2.4 Community Reference Panel

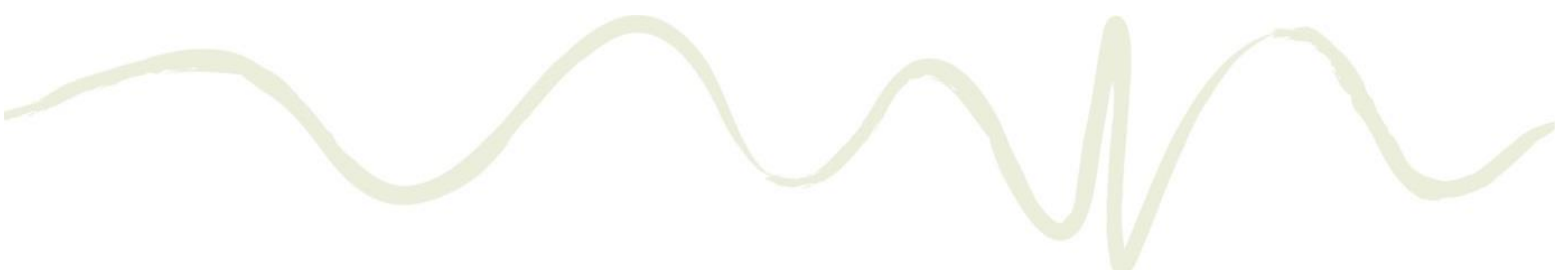
Three rounds of Community Reference Panel meetings have been held following the lodgment of the EIS, including:

- A briefing session on the EIS, explaining the process, and what was included.
- An update on the EIS, including detailed presentation of key topics, attended by members of the technical advisory team to answer questions. An overview of consultation outcomes, and how this has influenced the EIS was also provided.
- An update on the functional briefing documents for the 34 services areas, as outcomes from the Project User Group process. An update on the closure of the EIS and next steps. An update on the preliminary works on-site. A high-level overview of the design of the new hospital, and transport access and parking arrangements.

2.2.5 Publications

A number of publications were issued following lodgment of the SSDA, including:

- Planning Approvals Process and Environmental Impact Statement Fact Sheets, published 24 October 2018.
- Preliminary Works Fact Sheet published 25 October 2018.
- Exhibition of the Environmental Impact Statement published 31 October 2018.
- InTouch Special Edition, 31 October 2018, clarifying:
 - That the hospital is not planned to be larger than GCUH.
 - That plans are in place to manage traffic growth associated with the hospital.
 - That the proposed height of the building will not create a precedent for other development in the area.
 - That the hospital is not underfunded and will provide a comprehensive range of free public healthcare services to the Tweed-Byron catchment.
 - That the hospital will not be a public-private partnership.

- 
- The status and future of the Kingscliff Locality Plan.
 - The extent of consultation in relation to site selection.
 - How the project will contribute to road upgrades in the region.
 - Why the existing Tweed Hospital site is not suitable for redevelopment.
 - That the artist's impression of the buildings published through A Current Affair was not prepared by the project team, and online does not represent the planning for the project.
- Confirmation of site acquisition, released 6 November 2018, confirming commencement of preliminary works.
 - Publishing the first community newsletter, Valley Pulse, on 1 November 2018, including information on:
 - Benefits of the new hospital, from local clinician perspectives.
 - Inviting comment on the EIS
 - Information on the preliminary works starting on-site.
 - Outlining community involvement in the hospital design, including information on the Community Reference Panel.
 - Confirming exhibition of the EIS and SEPP, and actively calling for community involvement.
 - Confirming the award of the major tender for the next stage of planning and design, and subject to planning approval, undertaking early works for the new hospital.
 - Launch of Staff / Clinician video on the project website on 19 November 2018.
 - InTouch Special Edition – 19 December 2018, clarifying:
 - That there is sufficient budget to deliver the hospital.
 - That the number of staff and vehicles associated with the development have been assessed as part of the EIS.
 - That ambulance noise will be kept to a minimum, in accordance with NSW Ambulance guidelines.
 - That Tweed Valley Hospital will not be a tertiary level trauma hospital, and as such helicopter movements will be kept to a minimum.
 - That the site acquisition occurred in accordance with the publicly advertised Expression Interest Process, and subsequent compulsory acquisition in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*.
 - That the planning process has followed the appropriate process, noting the urgent need for health services in the region.
 - That the proposed rezoning will be specific to the site and will not create a precedent allowing development of other SSF in the region.
 - That the hospital will deliver a range of health services, with appropriate design and security arrangement to reduce opportunities for crime and incivility.
 - Planning for Healthcare Services for Tweed Heads published 12 December 2018.
 - Project Timeline published 20 December 2018.
 - InTouch special edition, published 9 January 2019, clarifying the impact of the proposal on the Flying Fox populations in Tweed.



2.2.5.1 Distribution of Publications

Publications were made publicly available through:

- The project website.
- Hard copies of fact sheets on permanent display at The Tweed Hospital reception and the Integrated Project Office reception.
- At the local member, Geoff Provest's electoral office reception.
- Hard copies of fact sheets provided at the aforementioned pop-ups.
- At staff forums, and to members of the Community Reference Panel.
- By mailing list distribution, including registered community members, staff members, and the Community Reference Panel.

3. Public Submissions

All public submissions have been considered and the key issues raised in relation to the Project are summarised in this section of the Submissions Report.

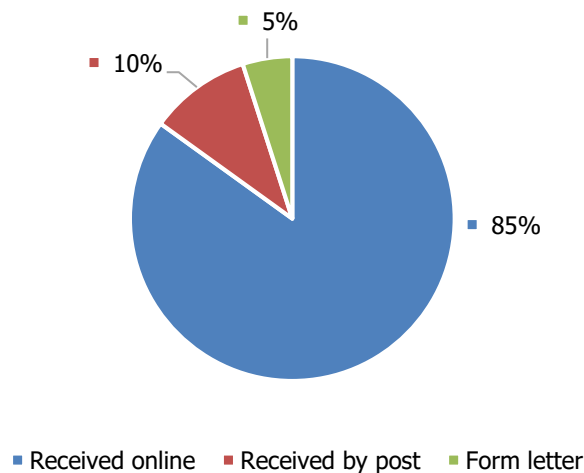
3.1 Introduction

3.1.1 Number of Submissions

The State Significant Development (SSD) application and supporting Environmental Impact Statement (EIS) received a total of 431 unique submissions, not including duplicates or multiple submissions from the same respondent. Of these approximately 114 submissions were related to the rezoning/ SEPP process, however have been included in assessment for completeness.

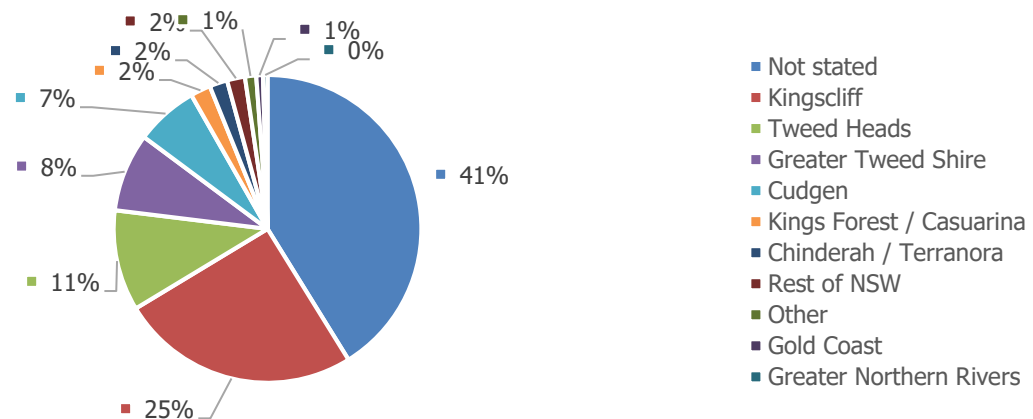
Submissions were made by completing the online form (85 percent) by post (10 percent), and by form letter (five percent). 98 percent of submissions were identified as being from individuals.

Figure 3-1 Submissions by response type



Submissions were received from a range of stakeholders, including representatives from the agricultural, environmental, health and government sectors, while the majority were received from residents. The residential breakdown in Figure 3-2, demonstrates that while a majority of respondents did not identify their locality, for those that did, feedback was most likely to come from residents of Kingscliff, Tweed Heads, the greater Tweed Shire and Cudgen areas.

Figure 3-2 Submissions by location



3.1.2 Feedback Raised in Submissions

All submissions were coded to consistently record and reflect views expressed, using the established coding framework (see **Appendix A**). This report makes reference to the number of submissions and the number of comments made on a particular issue. It is important to note that with regard to figures in this report, all submissions have the same weight.

Quotes used throughout the report are illustrative of overall sentiment, recommendations and ideas raised.

3.1.2.1 Overall Sentiment

91 percent of the 431 submissions registered an overall objection to the project. The existing community opposition, site selection process, community consultation and location were consistently raised as major issues.

A number of submissions also expressed concern in the quality and complexity of the EIS and the amount of time provided for review under the statutory requirements.

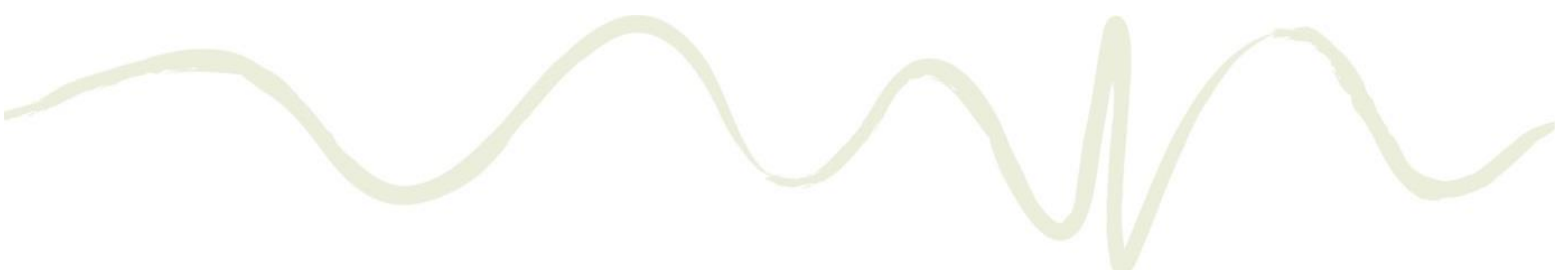
For the six percent of submissions in support of the SSDA and EIS, feedback mostly focused on support for the hospital in general, challenges to the productivity of the existing farmland and for the government to 'just get on with it'.

It is noted that the majority of respondents were supportive of a new hospital in general though, however not in favour of the location.

3.1.2.2 Key Themes

There was consistency across the board in terms of submission sentiment.

The decision to locate the hospital on State Significant Farmland (SSF) and amend the statutory planning framework applicable to Lot 102 DP 870722 (Project Site) were the overriding concerns across all submissions.

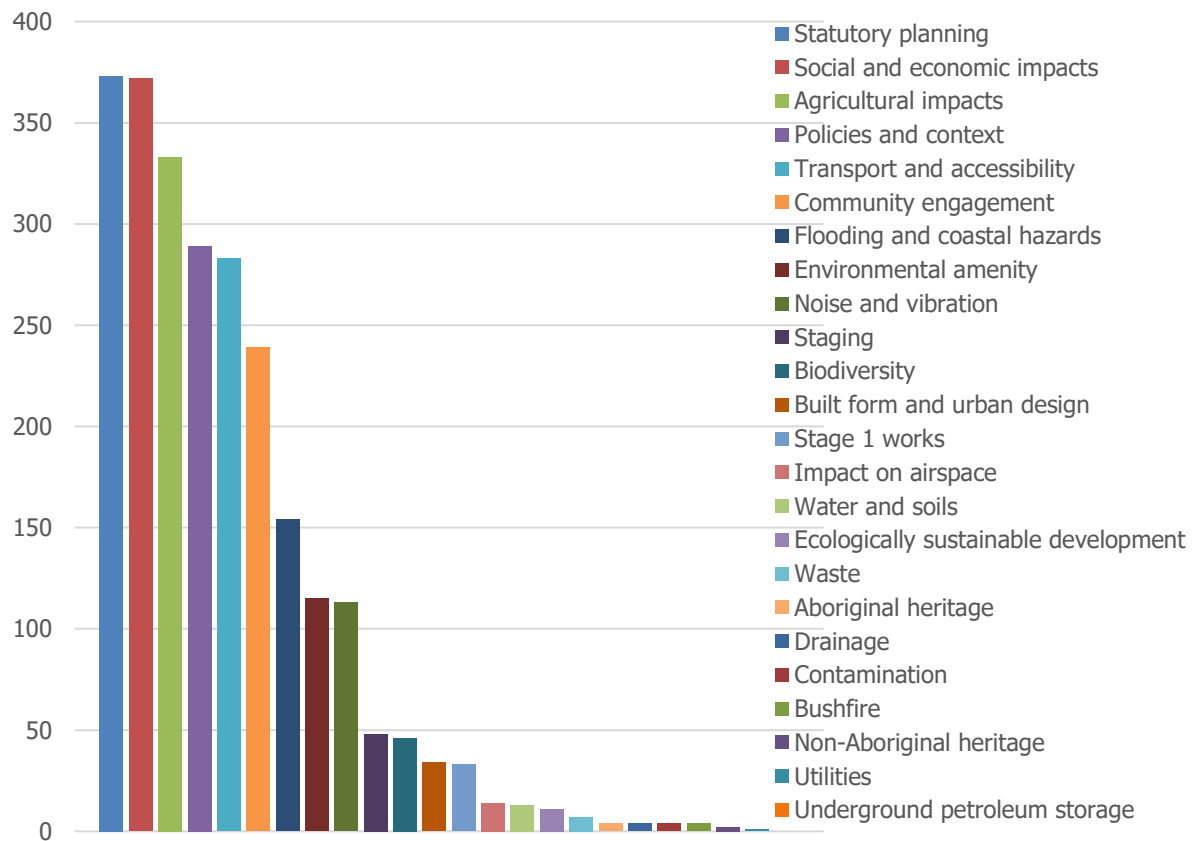


The key themes raised in submissions related to:

- **Perceived gaps** in the EIS – that is, what should have been included in the document. Many felt that the EIS did not adequately prove the site selection process and would have preferred
 - A full EIS for each site included in the initial site selection.
 - More transparency and consultation around the site selection.
 - Stronger reasoning for the selection of SSF as the preferred site.
- **Perceived tone** of the EIS – that is, how the information contained in the document was expressed. Key considerations raised were:
 - Complexity. Many felt the EIS overly complex and they were given insufficient time to review.
 - A lack of impartiality. Many felt that EIS did not examine the project on its merits but was rather to affirm the site selection.
 - Balance. Repeated concerns were raised around how health outcomes were priorities over agricultural, social and cultural outcomes.
- **Content** of the EIS – that is, what and how issues are raised and assessed. Feedback commonly focused on:
 - The importance of a wider scope for the social and economic assessment to better understand the short, medium and long-term social, economic and cultural impacts on Kingscliff and Tweed Heads.
 - Lack of consideration for perceived gaps in the community consultation and recognition of petitions. Many submissions questioned the outcomes drawn in the community engagement report and similarly for the agricultural assessment, the social and economic impact assessment and the flooding assessment.

These themes are reflected in the number and sentiment of submissions received per EIS area. Demonstrating a very consistently view across all submissions.

Figure 3-3 Submissions per EIS area



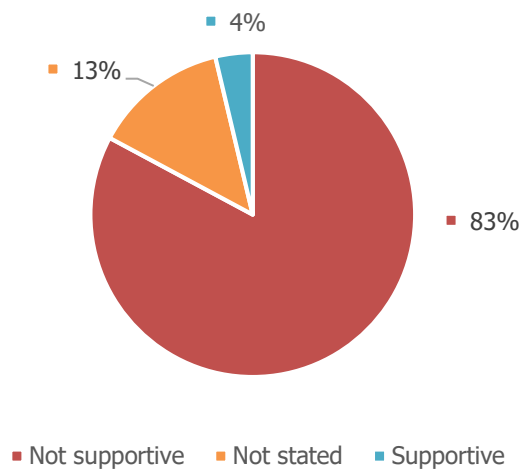
3.1.3 The Issue of Site Selection

Even though the EIS is site specific and the site for the Tweed Valley Hospital has been announced, the statutory planning framework for the Tweed Valley Hospital was one of the most referenced segments of the EIS, at about 88 percent of total submissions (see Figure 3-3).

Statutory planning for the EIS considered the zoning, planning controls and permissibility of a health service facility at the Project Site, and the thresholds and appropriate legislation for amending controls to allow for the development of the Tweed Valley Hospital. In determining permissibility for the Project Site, consideration was also given to the suitability of alternate sites, including redevelopment of the existing The Tweed Hospital (TTH).

Eighty three percent of respondents were not supportive of the proposed statutory planning framework for the project.

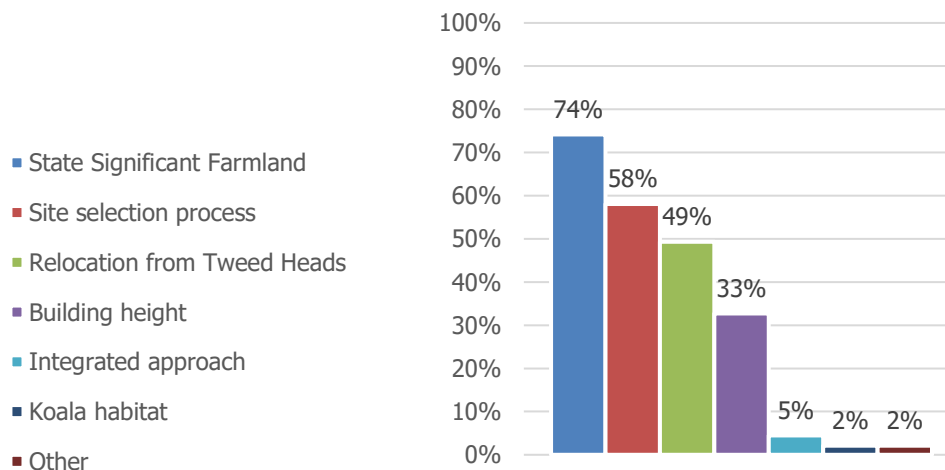
Figure 3-4 Sentiment regarding statutory planning



In particular, issues were raised around the use of SSF, and the technical review process forming part of site selection.

75 percent of submissions not in favour of the Project Site raised State Significant Farmland as their main concern to the statutory planning framework for the project. Followed by the lack of perceived transparency, consultation and fairness in the site selection process.

Figure 3-5 Key issues raised regarding statutory planning



It is clear, therefore, that the majority of submissions raised concerns in relation to the site selection process, including the utilisation of land that is designated as SSF.

When these concerns are extracted from submissions, it is noted that the number of comments made on aspects relating to the EIS is substantially reduced, both in terms of quantum and content.



3.1.3.1 Applicability

The issue of site selection, including demonstrating that the selected site is the only feasible alternative, in support of the SEPP amendment and variation from the NCRP 2036, was demonstrated through the site selection and acquisition process which has concluded.

Community submissions in relation to site selection are not considered relevant to the assessment of the EIS, which provides a site-specific assessment, and should therefore be set aside.

However, the extracts below are provided in relation to establishing the Project Site as the only feasible alternative:

Site Feasibility

The selection of the Project Site, and demonstration of its feasibility was outlined in the Site Selection Summary Report (SSSR), published following the announcement of the preferred site. The following extracts from the SSSR are relevant to the demonstrating that the Project Site represents the only feasible site available for development of the regional referral hospital:

“Community consultation identified that the vast majority of the community supports a new hospital in the region and there is consensus on the need for more healthcare services generally to keep up with growth in the region and an ageing population.

The assessment of the shortlisted Alternative Sites and the brownfield option is summarised in the previous sections of this report. The conclusion of the site selection process was a detailed merit and risk assessment of the feasibility of carrying out the project at multiple locations, based on all of the information gathered on the shortlisted sites and the Project Site.

This assessment led to the conclusion that the Project Site represented the best location and outcome for a new hospital in the Tweed-Byron catchment. The key factors of each of the shortlisted Alternative Sites, brownfield option, and the Project Site, are set out below.

■ **Chinderah Business and Knowledge Precinct**

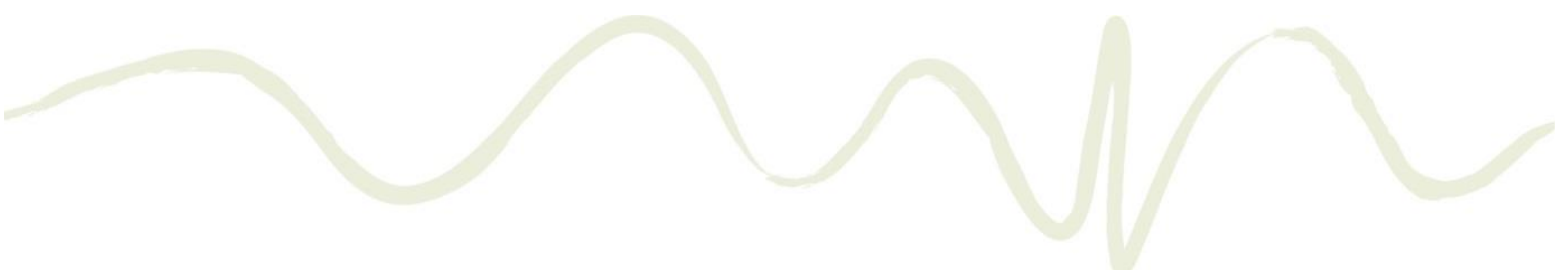
The shortlisted site at Chinderah received a good level of community support and was recognised for its proximity to the M1, providing great day-to-day access.

The key attributes of the site warranted a further review of an engineered solution to place critical hospital infrastructure above maximum flood levels and provide alternative road access in lesser flood events. The additional costs involved with the overall solution for this site would significantly impact on the budget available to build clinical space. The resulting impact on clinical services would be unacceptable and this option was therefore discounted.

■ **Kings Forest**

The Kings Forest site received strong community feedback, both for and against. Community support included that it would not impact State Significant Farmland and it was located away from Kingscliff itself. Opposition was primarily in relation to the potential impact on Koalas.

If a suitable urban environment is established through development of the proposed town centre, civic amenities and residential developments, the nominated Kings Forest site has the potential to respond well as a site for the new hospital.



The Kings Forest development has not yet commenced and has undergone a number of planning iterations over the last eight years. The proposed development of residential lots and the new town centre that is required to ensure the hospital is not an isolated development, are also subject to market forces that will ultimately dictate the pace of development. State and Commonwealth approvals are required to develop Kings Forest, specifically in relation to the protection of Koala habitat.

The risk of the hospital being delayed through complex multi-level approvals or becoming an isolated development for an extended period due to approvals and/or the uncertainty of the housing market were key considerations in the merit and risk review of this site.

■ **121 and 147 Tweed Coast Road**

The Tweed Coast Road site has many of the positive attributes of the Project Site, including good street frontage to a major road, easily accessible by the Tweed-Byron community, above flood levels, ready access to existing road and utilities infrastructure and the potential for a healing environment.

However, despite good street frontage to a major road it has no urban environment immediately adjacent to it.

The site is mapped as SSF and is surrounded on three sides by other SSF. This location risks fragmenting the main agricultural area of the Cudgen Plateau, and placing additional development pressure on farming activities.

■ **Brownfield option - expansion of the existing Tweed Hospital site**

The existing four hectare site is built-out and has inadequate space to develop new buildings. The site is constrained on all four sides by public roads; medium density residential developments to the north and south; Tweed River to the east and a major community recreation facility to the west (Tweed Heads Bowls Club). The location of the existing Tweed Hospital site does not provide equitable access to the broader Tweed-Byron catchment and is inaccessible in a Q20 flood event for the population south of the Tweed River.

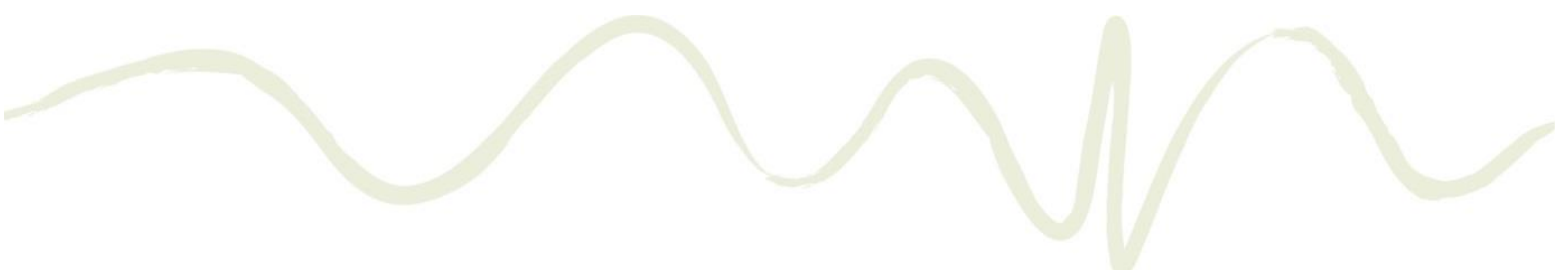
Major redevelopment of the site is contingent on an engineered solution to build critical hospital infrastructure above the PMF, this includes building the Emergency Department and hospital entry one level above ground level, requiring vehicle ramps and elevated ambulance/access decks. A multi-deck car park with a bridge link is also required to provide external areas above the PMF to support disaster response and compensate for lost car parking spaces.

The additional costs involved with the overall solution for this site would significantly impact on the budget available to build clinical space. The resulting impact on clinical services would be unacceptable.

The brownfield option was not a shortlisted option.

■ **Project Site – 771 Cudgen Road, opposite Kingscliff TAFE**

After considering all of the pros and cons of the sites against the Assessment Criteria, as well as the merit and risk review and the conclusions outlined above, on 30 June 2018 the NSW Minister for Health confirmed that the Tweed Valley Hospital will be located at 771 Cudgen Rd, Cudgen, opposite Kingscliff TAFE. The site selection process, including the Phase 2 assessment of nominated Alternative Sites, identified the Project Site as the best site for a major new referral hospital serving the Tweed-Byron region and capable of achieving the best possible outcomes for patients, consumers and clinicians with regard to hospital design, amenity and future expansion.”



The Project Site was selected as the most feasible based on several criteria outlined in the Site Selection Summary Report, as follows:

“Location, Access and Traffic

- *Existing road network – located close to the M1 and adjacent to a major road (Tweed Coast Road). Road network capacity is more distributed on the Tweed Valley Hospital site compared to the shortlisted Alternative Sites as there is the ability to connect into Turnock St and the eastern roads surrounding Kingscliff.*
- *Easily accessible by the Tweed-Byron region – well located to service existing and future population centres across the Tweed-Byron region, providing timely access by car for the majority (70 percent) of the Tweed LGA part of the catchment in under 30 minutes and with an average peak travel time equivalent to the existing Tweed Hospital site.*
- *The location south of Tweed Heads, with ready access to the M1 and Tweed Valley Way, is well placed to provide equitable access to the broader Tweed-Byron catchment and support hospital transfers from Byron Central Hospital and Murwillumbah District Hospital.*
- *Public transport - situated to take advantage of the existing public transport network with three public bus routes currently passing or terminating at the site. Further upgrade/ extension of services would be expected over time to service the increased demand from the hospital and major residential developments planned to the west and south of Kingscliff.*
- *Proposed road network – Council is seeking Commonwealth funding support for the duplication of Tweed Coast Road. While duplication of Tweed Coast Road is not technically required for development of the hospital on this site, early delivery would be advantageous. The site will require a range of upgrades along Cudgen Road and at the Tweed Coast Road intersection.*

An extension to Turnock Street connecting it back to Tweed Coast Road is also planned to the west of Kingscliff to support residential developments. This is not required for development of the hospital but will further improve alternative access to the site and take future pressure off Cudgen Road.
- *Flood access - the site for the hospital and its immediate access roads are above the PMF, with good street frontage and various access points. There is alternative road access for the southern coastal population when the M1 and Tweed Coast Road are impacted by flooding. This will maintain access to acute hospital services for the population south of the Tweed River, with population centres to the north able to access Robina Hospital within approximately 30 minutes.*

Urban Context

- *Surrounding urban environment – the site is located on the outskirts of Kingscliff in close proximity to existing community facilities, including the Kingscliff Community Health Centre, Kingscliff TAFE and retail and accommodation facilities in Kingscliff. The location opposite Kingscliff TAFE and the major population centre in Kingscliff provides a significant and immediate opportunity to build on existing urban infrastructure*

The site has extensive street frontage (>900 m) along Cudgen Road and its interface with Turnock Street, providing good street visibility of the hospital campus with multiple opportunities for additional site access points and lower level buildings addressing the street edge to achieve a sensitive town planning response to the area.

The location opposite Kingscliff TAFE, provides the opportunity to strengthen partnerships between Health and TAFE and develop an integrated precinct over time. This Health and Education Precinct would be complementary to the development planned to the west of Kingscliff, identified in the draft Kingscliff Locality Plan, including a Business and Knowledge Precinct adjacent to the M1 and residential development of around 1,500 dwellings.

- *Planning considerations – the 23-ha site has mixed zoning including approximately 70 percent agricultural, 20 percent nature reserve and 10 percent residential. The site is located on the north eastern tip of the Cudgen Plateau that has been mapped as State Significant Farmland (SSF). The agricultural area of the site represents approximately 0.13 percent of the total SSF mapped for the Far North Coast. A process will need to be undertaken to change the zoning of the site to permit development of the hospital and broader health and education campus over time. This is further covered under the “Environment, Heritage and Culture” heading below.*
- *Impact on/of neighbouring properties – The site is well situated to take advantage of the existing public transport network, and active transport will be promoted including the provision of end-of trip facilities. The potential to use some hospital car parking outside of peak times (e.g. weekends) to help reduce parking and traffic congestion in Kingscliff could be explored for community benefit. Social impact studies have been undertaken as part of the planning submission.*

Built Forms and Landscaping

- *Campus potential – preliminary master planning (developed to inform the site due diligence) has confirmed that the site will support the full range of hospital expansion scenarios as well as a range of complementary health-related uses to support the development of a broader health and education campus over time.*
This includes development of the initial hospital plus a range of expansion scenarios (e.g. +20 percent, +50 percent, + 100 percent), as well as a renewal strategy so that the hospital can be rebuilt on the campus in the long-term.
The length of the site, with its extensive street frontage, supports the development of a range of complementary health-related developments, with multiple access points and lower level buildings addressing the street edge.
The development areas will be supported and supplemented by greenspace providing ecological buffers and amenity for the campus.
- *Healing environment - the site sits on a north facing ridge, which maximises access to nature, light and panoramic views across the adjacent nature reserve and out to the mountains and coast. The hospital can be effectively designed to utilise the slope of the land to maximise amenity and views while being sensitive to the surrounding area.*
A nature reserve on the site provides views from the hospital and will be preserved outside of the development area. It will be fringed by greenspace providing ecological buffers and amenity for the campus.

Environment, Heritage and Culture

- *State Significant Farmland – as noted earlier, the site is mapped as SSF. It currently has approximately eight of the 23 ha growing crops at any one time.*
- *The location of the site will not fragment the Cudgen Plateau and will limit flow-on impacts to other SSF as follows:*
 - *The site sits on the far north-eastern tip of the agricultural area - it is on the urban side of Cudgen Road, opposite Kingscliff TAFE and between existing residential areas of Kingscliff and Cudgen, with future residential developments planned to the north.*
 - *The large size of the site allows for future hospital expansion and health and education developments on the site without encroaching on surrounding areas.*
 - *Strengthening partnerships between Health and TAFE provides further opportunity to ensure that all health and education and supporting developments can be accommodated across these two large and colocated sites into the future.*
 - *Community consultation identified that there was significant opposition to any site that includes SSF.*

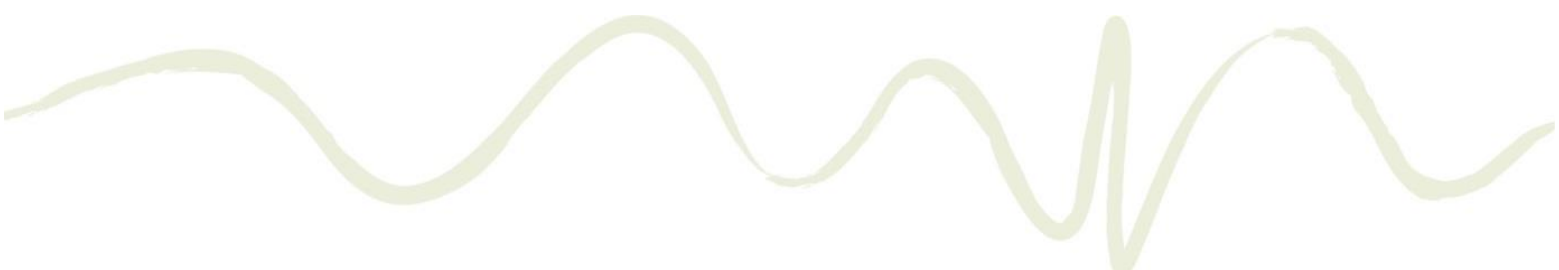
- *Impact on/of neighbouring properties – surrounding farms are already in close proximity to residences and schools and, with the existing controls required to manage these interfaces and an appropriate master planning response, agricultural activities will not significantly impact on hospital operations or be significantly impacted by it. A full Land Use Conflict Risk Assessment has been undertaken as part of the planning submission.*
The master plan will position the hospital on the broad plateau towards the centre of the site, which is away from the short section of site frontage that has farming activities on the opposite side of the road. The master plan will maintain landscaping screening along the southern site road boundary to help provide an additional buffer.
- *Flooding considerations – the site has 16 ha of land above the PMF level and its immediate access roads are also above the PMF. The site is also opposite Kingscliff TAFE, a well-equipped evacuation centre identified in regional flood and disaster planning and used by nearly 600 people in the 2017 floods.*
- *Ecological considerations – the northern part of the site supports and is adjacent to mapped Coastal Wetlands under the Coastal Management SEPP. Some parts of the hospital campus may also abut/ overlap mapped Proximity Area for Coastal Wetlands. Civil engineering review of the 'test fit' master planning options indicate that the facility can be delivered with appropriate controls on the quality and quantity of surface and groundwater flows to the adjacent wetland. There is also the opportunity to improve stormwater runoff quality from current farming activities in terms of sediment impact.*
Koala Habitat Class 2A and broad-leaved paperbark have been identified in the northern part of the site and fall under the Biodiversity Conservation Act (State legislation). However, ecological constraints are not present in the proposed location of the hospital development.
- *Bushfire – buffers and Asset Protection Zones (APZ) have been considered during initial master planning to accommodate expansion and growth of the hospital. These buffers overlap with planned greenspace, amenity and future road access, as well as environmental buffers and can be used to enhance the healing environment and overall amenity of the campus.*

Time, Cost and Value

- *Land acquisition – the site is privately owned and was put forward by the landowner in response to the EOI process. The negotiation and site acquisition process will be undertaken in accordance with the Land Acquisition (Just Terms Compensation) Act 1991.*
- *Existing utilities - major utilities (including electricity, telecommunications, sewer, reticulated water supply and drainage infrastructure) are available in close proximity to the site.*
- *Enabling works – utilities connections and road upgrades to Cudgen Road from and including the intersection with Tweed Coast Road will be required.*
- *Potential capital cost – based on draft planning, assessment of the overall capital cost for developing the hospital on this site indicates that it is affordable within the allocated capital budget for the project."*

Further, the feasibility of not carrying out the development has also been considered in the Draft Tweed Valley Service Statement 2018 (the Service Statement), which notes the urgent need for additional health and clinical services in the Tweed-Byron region. Section 1.2 of the Service Statement notes:

- ***"Demand for health services in the Tweed Valley exceeds current supply: Hospital occupancy rates of 100 percent or more indicate that TTH has reached capacity."***
- ***"Demand for health services closer to home: There is increasing demand by a growing and ageing population for more specialised health services to be provided closer to home."***



Section 2.2 of the Service Statement summarises the key indicators that demonstrate the demand is presently exceeding supply:

- *“TTH occupancy was 110 percent in 2017/18.*
- *Surgical and Medical Overnight beds are operating at capacity.*
- *TTH ED reached 53,140 ED presentations in 2017/18, a 26 percent increase since 2012/13, representing a 4.3 percent annualised growth and activity exceeds current infrastructure capacity.*
- *Kurrajong, the 25-bed adult inpatient Mental Health Unity at TTH was operating at 96 percent occupancy in 2017/18 and previous year was 103 percent.*
- *Demand for Chemotherapy treatment capacity exceeds current supply of 13 chairs.*
- *The range of Cancer and Radiotherapy services are limited and community is travelling further to access cancer services.*
- *Despite all the clinical redesign initiatives and winter management strategies, the winter period resulted in increased length of stay in ED and delays in emergency surgery due to lack of inpatient care.”*

The Tweed Valley Hospital is to be developed for the purpose of meeting the current urgent demand for additional health services in the Tweed Byron Region, and to accommodate the growing demand for health services in future. Section 6.2 of the Services Statement outlines the key services that the Tweed Valley Hospital will provide, which will include, and notes that it will be the only facility in the Tweed Byron network that will provide emergency operating theatres for all surgery, intensive care, coronary care, and a range of diagnostic services available 24 hours a day. The expected benefits of Tweed Valley Hospital are numerous, but critically the hospital will provide much needed health service capacity to meet increasing demand for health services of a growing and ageing population. The longer the project is delayed, the longer the Tweed-Byron Community will be deprived of the expected benefits of the Tweed Valley Hospital.

For these reasons, a new hospital in the Tweed-Byron region was considered to be essential for the provision of health services to the community, and the Project Site was determined to be the best location for that hospital.

It is noted that these reasons for the urgent provision of health services were confirmed and supported by the Supreme Court judgement in the matter of Duane John Joyce and Kerry Douglas Prichard v Health Administration Corporation, Minister for Health and Minister for Finance, Services and Property No. 2018/329307.

3.1.3.2 Responding to the issue of site selection

Notwithstanding the position held at Section 3.1.3.1 above, for completeness this response to community submissions document provides responses to community questions relating to both the site selection process, and the Project Site.

It is noted that the full site selection process and selection criteria is discussed in the SSSR, appended to the EIS at Appendix H.

3.1.4 Understanding the Clinical Services Planning Hierarchy

A number of submissions received contain sentiment or comments demonstrating a misunderstanding of the clinical services planning, and network approach to regional health services delivery.



This misunderstanding extends to:

- A lack of understanding of the level of hospital that the Tweed Valley Hospital is intended to be.
- Incorrectly assuming the Tweed Valley Hospital would generate emergency patient transfers by ambulance or helicopter commensurate with a tertiary level trauma hospital.
- Incorrectly assuming that the relocation of services from TTH to Tweed Valley Hospital would remove all health services from the community of Tweed, despite public commitment by Government that health services would continue to be provided in the Tweed Central Business District (CBD).
- Incorrectly assuming that the delivery of Tweed Valley Hospital would change service provision at Byron Central Hospital and Murwillumbah District Hospital.

It is crucial to understand that Tweed Valley Hospital will be a new regional referral hospital, aimed at increasing service capacity for the Northern New South Wales Local Health District (NNSW LHD), and specifically the Tweed and Byron Local Government Areas (LGA). This will reduce the need for patients to travel intra- and interstate for treatment, including referrals from other health facilities in the region.

This section provides clarification on the health services planning for the Tweed-Byron region undertaken by the NNSW LHD to clarify the above, and support assessment of the EIS:

3.1.4.1 Tweed Valley Network

The Tweed Valley Hospital will be a B1 Major Hospital Group 1 Hospital and will be the key referral hospital in the Tweed-Byron Network providing a range of health services at **predominantly role delineation Level 5**.

Murwillumbah District Hospital will provide services predominantly at role delineation Level 3. It will provide Emergency Medicine services to the local Murwillumbah community and play an important role in the Tweed Valley Network providing Inpatients:

- Satellite Renal Dialysis Services;
- Midwifery Group Practice (MGP) Low Risk Continuity of Care model of care;
- Satellite Chemotherapy services;
- Specialist Outpatient Services;
- Specialist Rehabilitation inpatient and Day Program services;
- Palliative Care;
- Pharmacy;
- Medical Imaging.

Byron Bay Central Hospital is a purpose built, public hospital providing a range of acute and sub-acute inpatient services with a role delineation Level 2 with some core services increased to role delineation Level 3.

Services provided at Byron Bay Central Hospital include:

- Emergency Department
- Inpatient Unit
- Medical Imaging
- Satellite Chemotherapy services
- Specialist Outpatient Services
- Maternity Group Practice

- Dental
- Pharmacy
- Sub-Acute Mental Health Inpatient Unit.

The **Tweed Valley Hospital** will be a B1 Major Hospital Group 1, is the main public referral hospital for residents of Tweed and Byron LGAs in Northern NSW and several southern Gold Coast SLAs in Queensland. It will provide services predominantly at role delineation Level 5 services.

The Tweed Valley Hospital will provide:

- Emergency Medicine, Intensive Care, Operating Theatres providing elective and emergency surgery to adults and children within role delineation.
- General and sub-specialty Medicine including Paediatric Medicine, General Medicine, Cardiology and, Haematology and Oncology.
- Pathology, Pharmacy and Medical Imaging.
- Procedural services including Interventional Cardiology, Nuclear Medicine and Interventional Radiology services.
- Comprehensive Cancer Care Services, including Radiotherapy, Chemotherapy and Specialist Outpatient Clinics.
- A wide range of diagnostic services.
- Rehabilitation services.
- Maternity and Neonatal services.
- Specialist inpatient and Community Mental Health services and D&A services.
- In-Centre Renal Dialysis.
- Specialist Outpatient Clinics including a wide range of Community and Allied Health services and non-cancer infusion services.

It will be the only facility in the Tweed Byron Network that will provide emergency surgery, Intensive Care, Coronary Care and a range of diagnostic services available 24 hours a day.

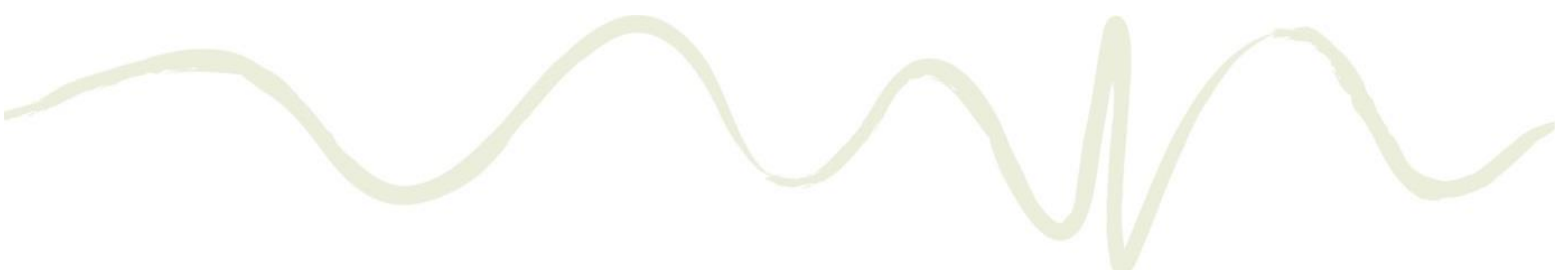
The Tweed Valley Hospital will be the 'hub' for Emergency Medicine services across the Tweed Valley and for the larger surrounding catchment population of the Tweed Byron Network. The Tweed Valley Hospital will support a tiered and networked service across the Tweed Valley, providing higher level Emergency Medicine services at role delineation Level 5 to Murwillumbah District Hospital and Byron Central Hospital.

Tweed Valley Hospital is not a tertiary facility and will not deliver Level 6 trauma services as provided by Gold Coast University Hospital (GCUH). Most helicopter movements will be pre-planned transfers of in-patients to higher level hospitals and these will occur mostly during daytime working hours. Inwards movements at night will be rare. Total numbers of movements at The Tweed Hospital currently averages 2 per week, there is expected to only be a slight increase on these numbers.

3.1.5 Changes and Additional Information as part of Submissions Report

Section 5 of this report provides a detailed outline of changes to the Project as part of the response to submissions. Additional information and assessment have also been provided and referenced where relevant throughout the Submissions Report. The changes and additional information include:

- Amendment and refinement in response to submissions, including agencies and DPE comments.
 - Key areas include:
 - social impact

- 
- traffic and carparking
 - architectural and urban design response, including visual impact
 - ecological
 - contamination
 - agricultural
- Additional social and economic assessment
 - Additional ecological assessment, including peer review
 - Additional contamination assessment, including peer review
 - Additional agricultural assessment
 - Establishment of a Transport, Access and Parking (TAP) Working Group to develop a range of transport strategies and measures, and will inform Stage 2.
- Addition of contamination remediation, site access and associated external road works. These works were originally going to be included in the Preliminary Works and include:
 - Addition of new site access point from Cudgen Road at the south-western boundary of the Project Site to Stage 1 Works scope.
 - Addition of new site access point from Turnock Street roundabout to the Project Site to Stage 1 Works scope.
 - Upgrade to the intersection of Tweed Coast Road/Cudgen Road (and approaches) confirmed as part of the Concept Proposal and to be undertaken at Stage 2.
 - Undertake soil remediation works as part of Stage 1 Works scope.

3.1.6 Approach to Responding to Submissions

A detailed coding exercise was undertaken to capture all comments made in each individual submission. The findings of this coding exercise is attached at **Appendix A**, and cross references each submission number to the issues raised by Secretary's Environmental Assessment Requirements (SEARs).

In responding to the submissions, the key issues are summarised, rather than responses duplicated.

3.1.6.1 Complex Submissions

It is noted that Submissions reference SD0423, SD0424, and SD0426 comprise complex submissions working through various components of the EIS, and addendums, in detail.

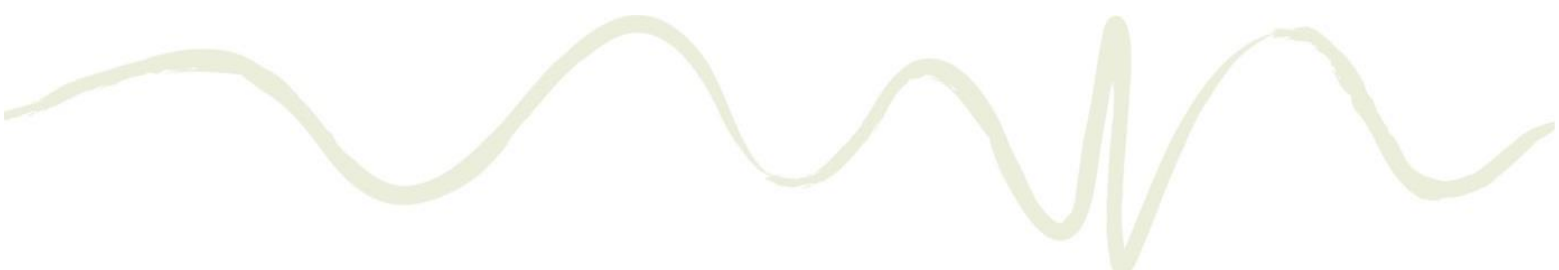
It is noted that there is significant overlap and repetition in these submissions. In responding, each issue is only responded to once, noting that for example traffic issues are raised in multiple categories, and where the issue has previously been responded to, it is not repeated.

It is also noted that SSD0423 in particular is heavily weighted toward issues pertaining to site selection, the proponent's position on which is outlined in Section 3.3.1.3.

3.1.6.2 Accusatory Sentiment

Several community submissions included comments relating to:

- The independence of decision making.
- Transparency of the process.

- 
- Independence and competency of expert advisors to Health Infrastructure.

While technical questions are addressed in this document, accusatory sentiment is not.

3.2 SEAR 1 Statutory Planning

3.2.1 Permissibility

3.2.1.1 Protection of State Significant Farmland

The proposal does not comply with either the provisions of the Northern Rivers Farmland Protection Project 2005 – Final Recommendations dated February 2005 (NRFPP), or Local Planning Directions. It is stated that the agricultural land designated SSF was set aside to be protected, and not utilised for other purposes such as the hospital. The NRFPP should be abided by.

The Strategic Planning Framework around SSF is discussed in detail in various sections of the EIS. While not directly relevant to land rezoned by way of a site-specific SEPP approved by the Minister of Planning, Local Planning Direction No. 5.3 (Farmland of State and Regional Significance on the NSW Far North Coast) under Section 9.1(2) (previously 117(2)) of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) effective 1 May 2017 imposes certain restrictions on the rezoning and development of SSF (Ministerial Direction).

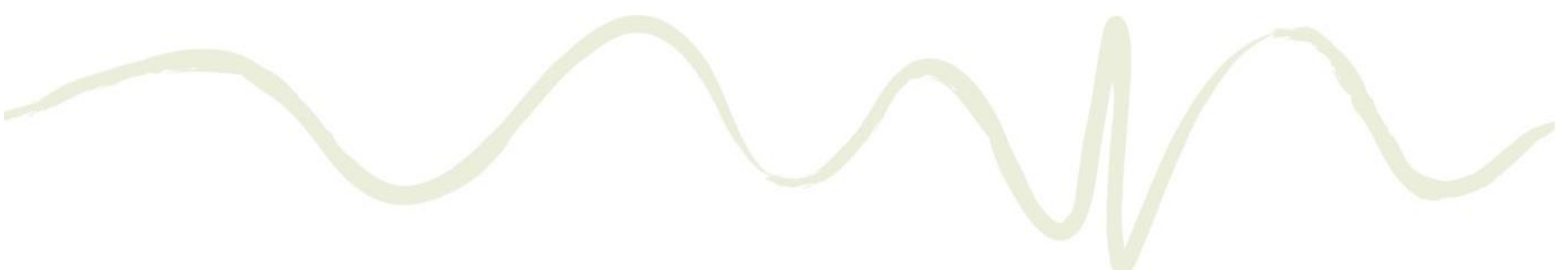
Following the adoption of the North Coast Regional Plan 2036 (NCRP 2036) the provision was adjusted to recognise the ability to rezone SSF (through a planning proposal) in certain limited circumstances. Clause 5 of the Ministerial Direction states that SSF cannot be rezoned for urban or rural residential purposes except if the rezoning is consistent with:

- The NCRP 2036; or
- Section 4 of the NRFPP, held by the NSW Department of Planning and Environment (DPE).

In accordance with Section 4(9) of the NRFPP, public infrastructure is permitted on land mapped as State or regionally significant where no feasible alternative is available. As outlined within the EIS a comprehensive and rigorous site selection process, subject to a range of evaluation criteria, and consideration of alternatives, has been undertaken. The shortlisted alternative sites not mapped as SSF were discounted as not feasible for differing reasons. These included, but were not necessarily limited to, the risk of the hospital being delayed through complex multi-level approvals or becoming an isolated development for an extended period due to approvals and/or the uncertainty of the housing market; or the additional costs involved would significantly impact on the budget available to build clinical space and the resulting impact on clinical services would be unacceptable.

It is considered that the relevant requirements under the NRFPP and NCRP 2036 have been satisfied and the proposed use of the Project Site for a health facility (namely the Tweed Valley Hospital) is justified and balances social, economic and environmental considerations and interests of the community for a net public benefit.

The NCRP 2036 also recognises that agricultural production may not be suitable on some pockets of mapped important farmland due to non-biophysical factors that make the land more suited to other uses. Whilst a portion of the land is currently farmed and of some value for agricultural production, in



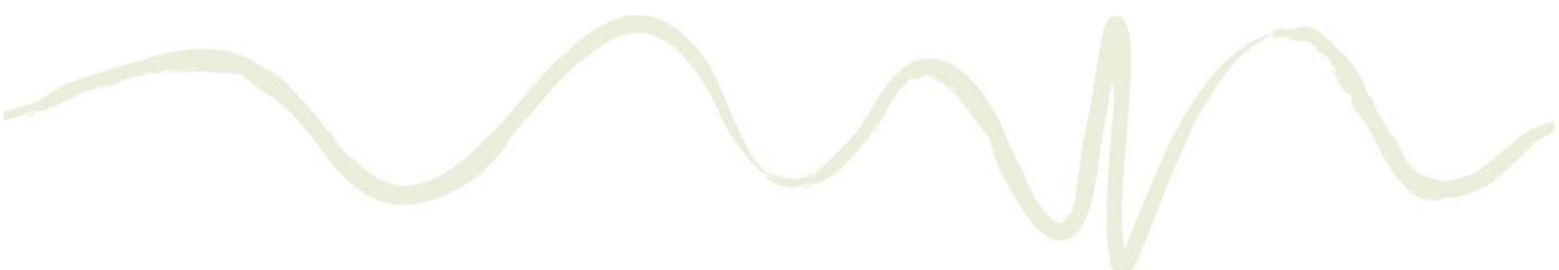
this instance, the site selection and community consultation process has determined the Project Site to be the most suitable site for the Tweed Valley Hospital and the shortlisted alternative sites as not feasible for differing reasons. It is also noted that many of the hospital upgrades that are proposed or currently under construction are not mentioned in the NCRP 2036. For example, the Coffs Harbour Hospital Expansion and the new Macksville Hospital for which early works have commenced are not mentioned in the NCRP 2036. This recognises the inherently iterative nature of planning, and the ability of the NCRP 2036 to respond to change within our communities.

As outlined in the NCRP 2036, pending a review of the existing farmland mapping, interim farmland variation criteria have been provided to consider the suitability of pockets of such land for non-agricultural land use (Appendix B of the NCRP 2036). This however is largely related to the expansion of residential and rural residential development, as development for public infrastructure can be permitted under the NRFPP. For completeness, the following outlines how the Project satisfies these criteria:

- As outlined in the Agricultural Impact Assessment (refer Appendix F of the EIS) and additional agricultural assessment provided (**Appendix J and K**), the Project Site affects the fringe of such mapped farmland and its location will not fragment the SSF of the Cudgen Plateau and would limit flow-on/ interface impacts to other farmland (also consistent with relevant objectives of the Tweed Sustainable Agriculture Strategy). The Project Site sits on the far north-eastern tip of the mapped important agricultural land. It is on the urban side of Cudgen Road, opposite Kingscliff TAFE and between existing residential areas of Kingscliff and Cudgen, with future residential development planned to the north. Its large size allows for future hospital expansion and health and education developments without encroaching on surrounding rural areas as well as the provision of appropriate buffers and strategies to minimise and manage potential land use conflict. The Project Site was selected based on a wide range of evaluation criteria as outlined in Section 1.6 of the EIS and is justified as the most suitable and feasible option;
- Potential for rural land use conflict has been assessed and can be effectively minimised and managed (refer to Section 5.6.4 and Appendix J of the EIS and **Appendix K** of this report);
- Services and utilities are available in proximity to the site and infrastructure delivery is feasible and would not impact other farmland (refer Appendix F of the EIS);
- The proposed land use would not have an adverse impact on areas of high environmental value, and Aboriginal or historic heritage significance; and
- The Project Site was selected, and the hospital Masterplan developed, in response to a range of hospital related planning criteria including, but not limited to, the following criteria outlined in the NCRP 2036: avoiding flood prone land, providing adequate bush fire protection, low to no risk of acid sulfate soils, constructability, slope and geotechnical considerations.

The Tweed Valley Hospital project would result in the loss of approximately 16 ha of mapped SSF, with the total potentially arable area that will be lost being 12.01 ha based on the agricultural assessment at **Appendix J**. A review of the SSF mapping, undertaken by the project team, indicates that the total area within the Cudgen Plateau mapped as SSF is approximately 580 ha and not the 530 ha as referenced in the submission. A reduction in the SSF of 16 ha would not reduce the area to less than 500 ha. The NRFPP and Local Planning Directions include provisions to protect SSF from residential and urban development, with the only exception being for public infrastructure that has been supported by a thorough review of alternative sites. The Project is for public purpose infrastructure and the Project Site was deemed the most suitable and feasible option on the basis of an extensive review of potential sites.

More than 50 sites were assessed in total as part of the comprehensive and rigorous site selection process. These included sites considered through a publicly advertised expression of interest process, and those nominated through the subsequent community consultation process. All sites were



assessed by Health Infrastructure and their technical advisors based on the site requirements and selection criteria. Short listed sites were subject to more detailed review including test case modelling, non-invasive on-site investigations and detailed feasibility assessment.

The SSF designation requires a minimum 500 ha threshold to remain viable. A loss of 30 ha of agricultural land would bring the Cudgen Plateau under this technical threshold.

The Tweed Valley Hospital project would result in the loss of approximately 16 ha of mapped SSF. A review of the SSF mapping, undertaken by the project team, indicates that the total area within the Cudgen Plateau mapped as SSF is approximately 580 ha and not the 530 ha as referenced in the submission.

For comparison to mapped SSF, based on the agricultural assessment undertaken, the total potentially arable area on the Project Site that will be lost is 12.01 ha (refer to agricultural response at **Appendix J**).

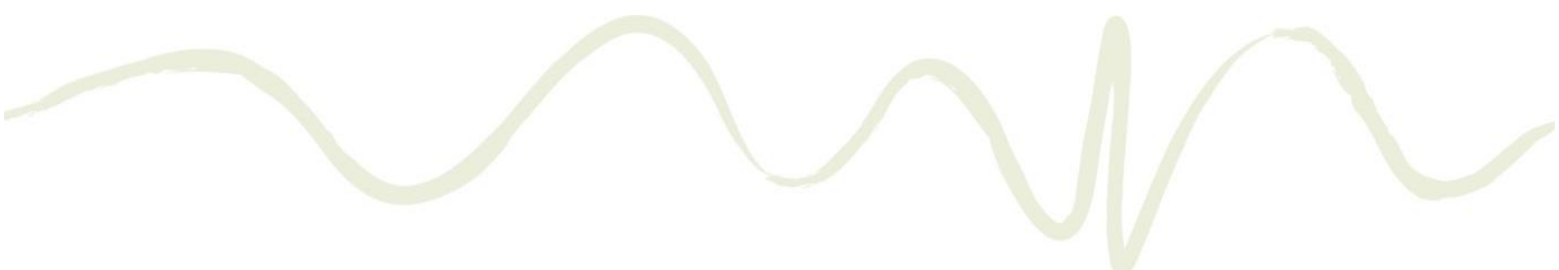
A reduction in mapped SSF of 16 ha (or approximately 2.8 percent of SSF mapped for the Cudgen Plateau) would not reduce the area to less than 500 ha. The NRFPP and Local Planning Directions include provisions to protect SSF from residential and urban development, with the only exception being for public infrastructure that has been supported by a thorough review of alternative sites. The Project is for a public purpose/ infrastructure and the Project Site was deemed the most suitable and feasible option on the basis of an extensive review of potential sites (refer to Sections 3.1.3.1 and 3.2.1.2).

Submissions state that development of land designated for SSF will establish a precedent allowing for the future development of land with the same SSF designation, and the ultimate loss of the Cudgen Plateau. In particular, it is suggested that the need for additional land to accommodate development ancillary to the hospital will drive the development of agricultural land surrounding this hospital site.

The Project Site was selected as the most suitable based on a rigorous site selection process, and alternatives ruled out through detailed technical assessment and due diligence studies. While there would be a very small loss of SSF on the urban fringe, the main SSF area of the Cudgen Plateau would not be affected. The cultivated area of the Project Site is small relative to the total farming area on the Cudgen Plateau SSF. Its removal will therefore not have a significant impact on agricultural productivity, especially given it contains partly sloping land which is not ideal for agricultural production and a rocky sub soil which would result in low agricultural yields.

The land area affected represents approximately 0.13 per cent of SSF mapped for the Far North Coast of NSW or 0.013 per cent of mapped BSAL land for the same region. The 16 ha of SSF mapped on the site equates to approximately 2.8 per cent of SSF mapped within the Cudgen Plateau area (being 580 ha). The NRFPP and Local Planning Directions include provisions to protect SSF from residential and urban development, with the only exception being for public infrastructure that has been supported by a thorough review of alternative sites.

As the Project is for public purpose infrastructure and given that the Project Site was deemed the most suitable and the feasible option on the basis of an extensive review of potential sites, arguments that suggest the proposed hospital would set a precedent and could allow further urban development to



occur on SSF are unfounded. The draft SEPP and rezoning process by DPE would also ensure that rezoning of the Project Site to SP2 Infrastructure does not have any unintended consequences beyond the Project Site. This zoning relates to essential State Significant Infrastructure. On this basis there would be no further incremental or cumulative impact to SSF attributed.

The NSW Department of Premier and Cabinet (DPC), with the support of the Tweed Valley Hospital Cross Agency Planning Committee, including Health Infrastructure, is currently pursuing a collaborative opportunity with relevant agencies, outside of the Project, to support the agricultural industry in the region. This will include improving utilisation of agricultural land, including that which has not been farmed for some time. If successful, this initiative would provide opportunities to offset the reduction of arable land and crops at any one time on the Project Site. Engagement with the NSW Department of Industry – Lands and Water Division (Primary Industries – Agriculture) (DPI Agriculture) regarding incentives/ strategies will form part of the development of that opportunity.

This initiative will target a broad range of objectives. Examples include:

- Partnerships with Kingscliff TAFE and other education providers to research and improve productivity.
- Opportunities to get under-utilised land back into production.

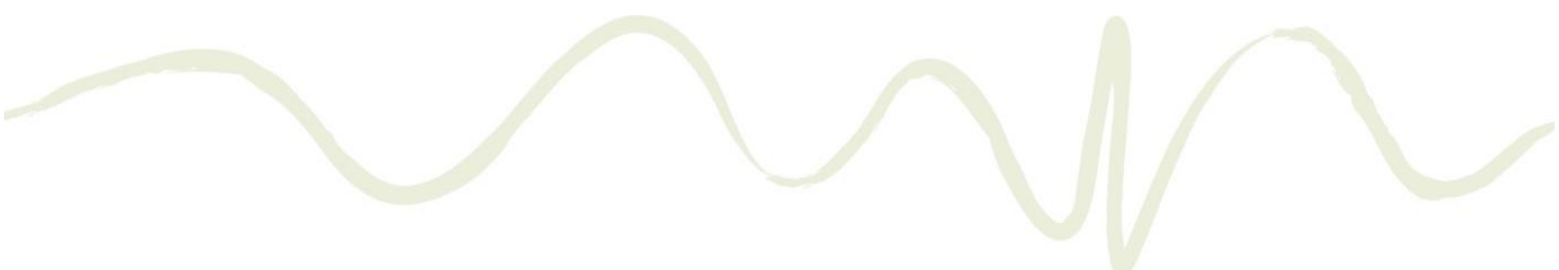
With regard to potential ancillary development, the relevant provisions that aim to protect SSF remain applicable to such designated land and would need to be applied. The project for the Tweed Valley Hospital is a unique scenario where an exception for public infrastructure may be applied, supported by an extensive site selection and evaluation of alternatives.

The project would not set a precedent or facilitate other potential urban development on SSF for the reasons above. Additionally, all development applications must be assessed on merit and the relevant land use controls and policy provisions considered in the context of an application.

The Project Site and master-planning process (as indicated in the Built Form and Urban Design Report – Appendix C of the EIS) considers and demonstrates the availability of space for potential future expansion, renewal and ancillary development on the Project Site, without further encroaching on surrounding SSF. The Masterplan has been prepared in consideration of accommodating the following:

- Tweed Valley Hospital, including support building (starting case).
- Future hospital expansion should it be required.
- Future hospital renewal providing capacity to replace the hospital when required.
- Future complementary development program, that may include:
 - Allied Residential e.g. carers accommodation.
 - Education, Training and Research.
 - Mixed used, retail amenity and education.
 - Private medical consulting rooms.
 - Health and Social service.

Furthermore, areas in West Kingscliff, Turnock Street, North Kingscliff and surrounds, as identified in the draft Kingscliff Locality Plan (KLP), are designated as potential future growth areas and there may be land available for development near the Site, within the existing and emerging urban catchment of the locality, that does not impact on or conflict with SSF, should that be required. On this basis there would be no further incremental loss or cumulative impact on SSF. The Project, including potential future ancillary development, can be accommodated without impact to SSF beyond the Project Site.



As the development proposal incorporates a building envelope of up to nine storeys, a precedent will be established allowing for other development in the area to exceed the three-storey limit suggested by the Kingscliff Locality Plan.

The draft SEPP and rezoning process by DPE, undertaken simultaneous to this SSDA and EIS, is specific to the Project Site and will ensure that the rezoning of the Project Site to SP2 Infrastructure does not have any unintended consequences beyond the Project Site.

The zoning and land use controls will be specific to the development of a hospital, as an SSD, on the Project Site, and will not apply to any other site. On this basis there would be no further incremental or cumulative impact, or changes to height beyond the Project Site.

3.2.1.2 Basis of Site Selection

Challenge to the basis of site selection, and the identification of the site as the only feasible alternative. It is stated that other feasible sites do exist. It is suggested that SSF can only be developed where no other suitable land can be identified, and the project's basis of demonstrating this is challenged.

More than 50 sites were assessed in total as part of the site selection process. These included sites considered through a publicly advertised expression of interest process (EOI), sites nominated by the community, and land identified by Health Infrastructure's consultant team as potentially suitable. At least 15 of the 50 sites identified by Health Infrastructure and their technical advisors were not necessarily for sale at the time of investigation.

Site requirements included:

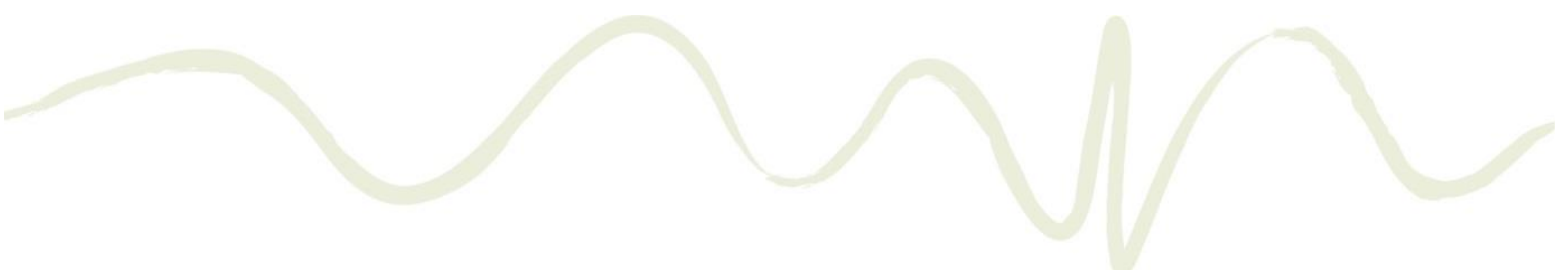
- The site is located within the area extending from Tweed Heads to Pottsville and up to 15 km inland.
- Has a developable area of between eight and 16 ha.
- Is easily accessible and close to the main arterial road link.
- Is available for development from late 2018.

Sites were evaluated on a range of criteria, including:

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

Legislative and Tweed Shire Council requirements, including the location of hospital infrastructure above the Probable Maximum Flood (PMF) level and road access above the one percent Annual Exceedance Probability flood level were also key considerations.

An initial assessment of all sites was undertaken, including those identified by Health Infrastructure, nominated through the EOI process, or nominated through the subsequent community consultation period. This initial assessment determined those sites that met the site requirements. Only those that



met the requirements were subject to the very detailed consideration and assessment against the site criteria.

Three sites were shortlisted for assessment against the preferred site, including:

- A site within the proposed Chinderah Business and Knowledge Precinct.
- A site at the northern end of Kings Forest Precinct 5.
- 121 to 147 Tweed Coast Road, Cudgen.

These sites were compared to the detailed assessment of the preferred site, including detailed technical assessment that considered:

- Traffic and access, including regional connectivity and public transport.
- 'Test Fit master planning' including massing diagrams.
- Flood immunity including flood access.
- Planning considerations
- On-site, non-invasive site investigations.
- Ecological considerations
- Impact on surrounding land uses.

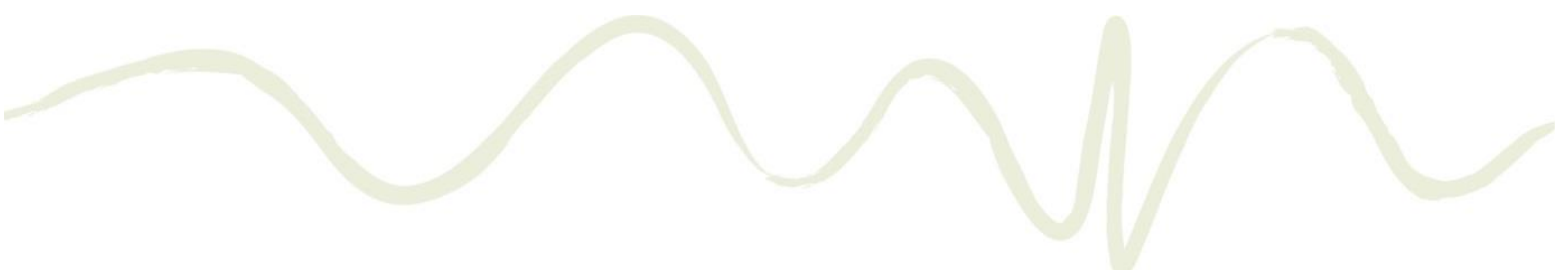
In addition, a design study was completed on the existing site of TTH, which considered acquiring land around the existing TTH; building the hospital; decanting services and demolishing the existing buildings; and then using the existing site for future expansion and complementary uses. This was not a shortlisted option, and the comparison study reaffirmed that redevelopment around the existing hospital site was not a viable proposition.

The results of these detailed assessments confirmed the original site selection of 771 Cudgen Road, Kingscliff.

In accordance with Section 4(9) of the NRFPP, public infrastructure is permitted on land mapped as State or regionally significant where no feasible alternative is available.

A rigorous site selection process, subject to a range of evaluation criteria and consideration of alternatives has been undertaken. A comprehensive site selection summary report was prepared, and is contained within the EIS documentation (the Site Selection Summary Report is published on the Tweed Valley Hospital Project website and attached to Appendix H - the Consultation Report - in the EIS). The shortlisted alternative sites not mapped as SSF were discounted as not feasible for differing reasons, while site feasibility is confirmed, as discussed under Section 1.3, and below. These included, but were not necessarily limited to, the risk of the hospital being delayed through complex multi-level approvals or becoming an isolated development for an extended period due to approvals and/or the uncertainty of the housing market; or the additional costs involved would significantly impact on the budget available to build clinical space and the resulting impact on clinical services would be unacceptable. It is submitted that the relevant requirements under the NRFPP and NCRP 2036 are satisfied and the proposed use of the Project Site for a health facility (namely the Tweed Valley Hospital) is justified and balances social, economic and environmental considerations and interests of the community for a net public benefit.

The primary social benefits to the local community materialise in terms of improved availability, capacity and quality of healthcare. Specifically, the improvements will come from relieving constraints on perioperative services, inpatient beds, ED treatments/care, cancer services and elective surgery. The project will also result in the employment of more health practitioners, greater opportunities for practitioner upskilling as well as broader training and education for both staff and students across the campus and broader health and education precinct. This would include the hospital's programs around



clinical placements for tertiary students, vocational education traineeships and digital library services for researchers.

The NCRP 2036 also recognises that agricultural production may not be suitable on some pockets of mapped important farmland due to non-biophysical factors that make the land more suited to other uses. Whilst the Project Site was farmed up to site acquisition, and of some value for agricultural production, in this instance, the site selection and community consultation process has determined the Project Site to be the most suitable site for the Tweed Valley Hospital and the shortlisted alternative sites as not feasible for differing reasons.

SSF could have been avoided, and the site selection process did not demonstrate that the selected site was the only feasible site available.

The issue and applicability of site selection has also been discussed at Section 3.1.3.1. The selection of the site, and demonstration of feasibility was outlined in the Site Selection Summary Report, published following the announcement of the preferred site. The following sections are relevant to the demonstration of site feasibility:

“Community consultation identified that the vast majority of the community supports a new hospital in the region and there is consensus on the need for more healthcare services generally to keep up with growth in the region and an ageing population.

The assessment of the shortlisted Alternative Sites and the brownfield option is summarised in the previous sections of this report. The conclusion of the site selection process was a detailed merit and risk assessment of the feasibility of carrying out the project at multiple locations, based on all of the information gathered on the shortlisted sites and the Project Site.

This assessment led to the conclusion that the Project Site represented the best location and outcome for a new hospital in the Tweed-Byron catchment. The key factors of each of the shortlisted Alternative Sites, brownfield option, and the Project Site, are set out below.

■ **Chinderah Business and Knowledge Precinct**

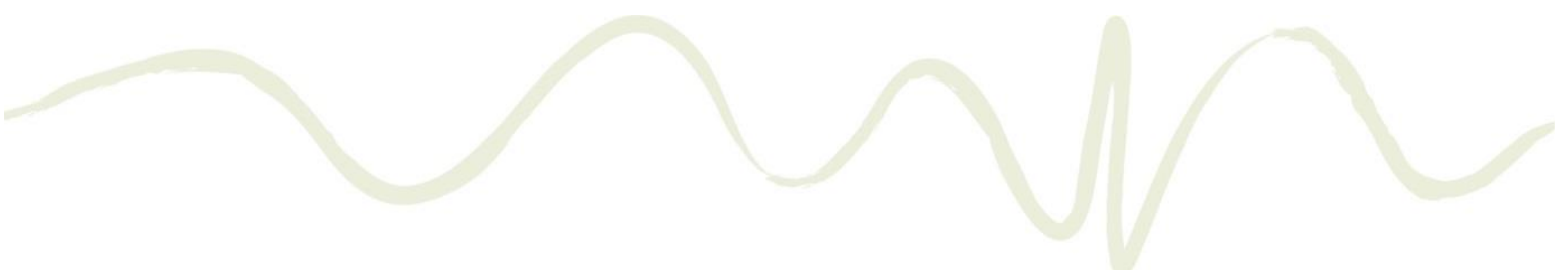
The shortlisted site at Chinderah received a good level of community support and was recognised for its proximity to the M1, providing great day-to-day access.

The key attributes of the site warranted a further review of an engineered solution to place critical hospital infrastructure above maximum flood levels and provide alternative road access in lesser flood events. The additional costs involved with the overall solution for this site would significantly impact on the budget available to build clinical space. The resulting impact on clinical services would be unacceptable and this option was therefore discounted.

■ **Kings Forest**

The Kings Forest site received strong community feedback, both for and against. Community support included that it would not impact State Significant Farmland and it was located away from Kingscliff itself. Opposition was primarily in relation to the potential impact on Koalas.

If a suitable urban environment is established through development of the proposed town centre, civic amenities and residential developments, the nominated Kings Forest site has the potential to respond well as a site for the new hospital.



The Kings Forest development has not yet commenced and has undergone a number of planning iterations over the last eight years. The proposed development of residential lots and the new town centre that is required to ensure the hospital is not an isolated development, are also subject to market forces that will ultimately dictate the pace of development. State and Commonwealth approvals are required to develop Kings Forest, specifically in relation to the protection of Koala habitat.

The risk of the hospital being delayed through complex multi-level approvals or becoming an isolated development for an extended period due to approvals and/or the uncertainty of the housing market were key considerations in the merit and risk review of this site.

■ **121 and 147 Tweed Coast Road**

The Tweed Coast Road site has many of the positive attributes of the Project Site, including good street frontage to a major road, easily accessible by the Tweed-Byron community, above flood levels, ready access to existing road and utilities infrastructure and the potential for a healing environment.

However, despite good street frontage to a major road it has no urban environment immediately adjacent to it.

The site is mapped as SSF and is surrounded on three sides by other SSF. This location risks fragmenting the main agricultural area of the Cudgen Plateau, and placing additional development pressure on farming activities.

■ **Brownfield option - expansion of the existing Tweed Hospital site**

The existing four hectare site is built-out and has inadequate space to develop new buildings. The site is constrained on all four sides by public roads; medium density residential developments to the north and south; Tweed River to the east and a major community recreation facility to the west (Tweed Heads Bowls Club). The location of the existing Tweed Hospital site does not provide equitable access to the broader Tweed-Byron catchment and is inaccessible in a Q20 flood event for the population south of the Tweed River.

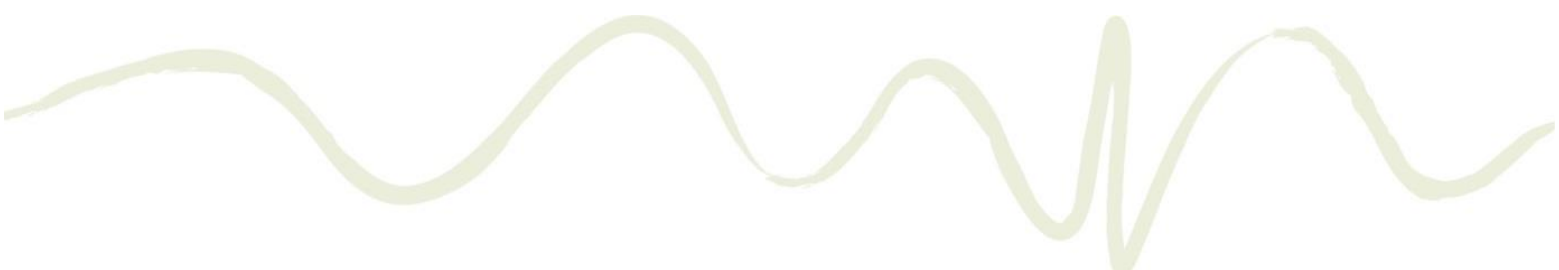
Major redevelopment of the site is contingent on an engineered solution to build critical hospital infrastructure above the PMF, this includes building the Emergency Department and hospital entry one level above ground level, requiring vehicle ramps and elevated ambulance/access decks. A multi-deck car park with a bridge link is also required to provide external areas above the PMF to support disaster response and compensate for lost car parking spaces.

The additional costs involved with the overall solution for this site would significantly impact on the budget available to build clinical space. The resulting impact on clinical services would be unacceptable.

The brownfield option was not a shortlisted option.

■ **Project Site – 771 Cudgen Road, opposite Kingscliff TAFE**

After considering all of the pros and cons of the sites against the Assessment Criteria, as well as the merit and risk review and the conclusions outlined above, on 30 June 2018 the NSW Minister for Health confirmed that the Tweed Valley Hospital will be located at 771 Cudgen Rd, Cudgen, opposite Kingscliff TAFE. The site selection process, including the Phase 2 assessment of nominated Alternative Sites, identified the Project Site as the best site for a major new referral hospital serving the Tweed-Byron region and capable of achieving the best possible outcomes for patients, consumers and clinicians with regard to hospital design, amenity and future expansion.”



The Project Site was selected as the most feasible based on several criteria outlined in the Site Selection Summary Report, as follows:

“Location, Access and Traffic

- *Existing road network – located close to the M1 and adjacent to a major road (Tweed Coast Road). Road network capacity is more distributed on the Tweed Valley Hospital site compared to the shortlisted Alternative Sites as there is the ability to connect into Turnock St and the eastern roads surrounding Kingscliff.*
- *Easily accessible by the Tweed-Byron region – well located to service existing and future population centres across the Tweed-Byron region, providing timely access by car for the majority (70 percent) of the Tweed LGA part of the catchment in under 30 minutes and with an average peak travel time equivalent to the existing Tweed Hospital site.*
- *The location south of Tweed Heads, with ready access to the M1 and Tweed Valley Way, is well placed to provide equitable access to the broader Tweed-Byron catchment and support hospital transfers from Byron Central Hospital and Murwillumbah District Hospital.*
- *Public transport - situated to take advantage of the existing public transport network with three public bus routes currently passing or terminating at the site. Further upgrade/ extension of services would be expected over time to service the increased demand from the hospital and major residential developments planned to the west and south of Kingscliff.*
- *Proposed road network – Council is seeking Commonwealth funding support for the duplication of Tweed Coast Road. While duplication of Tweed Coast Road is not technically required for development of the hospital on this site, early delivery would be advantageous. The site will require a range of upgrades along Cudgen Road and at the Tweed Coast Road intersection.*

An extension to Turnock Street connecting it back to Tweed Coast Road is also planned to the west of Kingscliff to support residential developments. This is not required for development of the hospital but will further improve alternative access to the site and take future pressure off Cudgen Road.
- *Flood access - the site for the hospital and its immediate access roads are above the PMF, with good street frontage and various access points. There is alternative road access for the southern coastal population when the M1 and Tweed Coast Road are impacted by flooding. This will maintain access to acute hospital services for the population south of the Tweed River, with population centres to the north able to access Robina Hospital within approximately 30 minutes.*

Urban Context

- *Surrounding urban environment – the site is located on the outskirts of Kingscliff in close proximity to existing community facilities, including the Kingscliff Community Health Centre, Kingscliff TAFE and retail and accommodation facilities in Kingscliff. The location opposite Kingscliff TAFE and the major population centre in Kingscliff provides a significant and immediate opportunity to build on existing urban infrastructure*

The site has extensive street frontage (>900 m) along Cudgen Road and its interface with Turnock Street, providing good street visibility of the hospital campus with multiple opportunities for additional site access points and lower level buildings addressing the street edge to achieve a sensitive town planning response to the area.

The location opposite Kingscliff TAFE, provides the opportunity to strengthen partnerships between Health and TAFE and develop an integrated precinct over time. This Health and Education Precinct would be complementary to the development planned to the west of Kingscliff, identified in the draft Kingscliff Locality Plan, including a Business and Knowledge Precinct adjacent to the M1 and residential development of around 1,500 dwellings.

- *Planning considerations – the 23-ha site has mixed zoning including approximately 70 percent agricultural, 20 percent nature reserve and 10 percent residential. The site is located on the north eastern tip of the Cudgen Plateau that has been mapped as State Significant Farmland (SSF). The agricultural area of the site represents approximately 0.13 percent of the total SSF mapped for the Far North Coast. A process will need to be undertaken to change the zoning of the site to permit development of the hospital and broader health and education campus over time. This is further covered under the “Environment, Heritage and Culture” heading below.*
- *Impact on/of neighbouring properties – The site is well situated to take advantage of the existing public transport network, and active transport will be promoted including the provision of end-of trip facilities. The potential to use some hospital car parking outside of peak times (e.g. weekends) to help reduce parking and traffic congestion in Kingscliff could be explored for community benefit. Social impact studies have been undertaken as part of the planning submission.*

Built Forms and Landscaping

- *Campus potential – preliminary master planning (developed to inform the site due diligence) has confirmed that the site will support the full range of hospital expansion scenarios as well as a range of complementary health-related uses to support the development of a broader health and education campus over time.*
This includes development of the initial hospital plus a range of expansion scenarios (e.g. +20 percent, +50 percent, + 100 percent), as well as a renewal strategy so that the hospital can be rebuilt on the campus in the long-term.
The length of the site, with its extensive street frontage, supports the development of a range of complementary health-related developments, with multiple access points and lower level buildings addressing the street edge.
The development areas will be supported and supplemented by greenspace providing ecological buffers and amenity for the campus.
- *Healing environment - the site sits on a north facing ridge, which maximises access to nature, light and panoramic views across the adjacent nature reserve and out to the mountains and coast. The hospital can be effectively designed to utilise the slope of the land to maximise amenity and views while being sensitive to the surrounding area.*
A nature reserve on the site provides views from the hospital and will be preserved outside of the development area. It will be fringed by greenspace providing ecological buffers and amenity for the campus.

Environment, Heritage and Culture

- *State Significant Farmland – as noted earlier, the site is mapped as SSF. It currently has approximately eight of the 23 ha growing crops at any one time.*
- *The location of the site will not fragment the Cudgen Plateau and will limit flow-on impacts to other SSF as follows:*
 - *The site sits on the far north-eastern tip of the agricultural area - it is on the urban side of Cudgen Road, opposite Kingscliff TAFE and between existing residential areas of Kingscliff and Cudgen, with future residential developments planned to the north.*
 - *The large size of the site allows for future hospital expansion and health and education developments on the site without encroaching on surrounding areas.*
 - *Strengthening partnerships between Health and TAFE provides further opportunity to ensure that all health and education and supporting developments can be accommodated across these two large and colocated sites into the future.*
 - *Community consultation identified that there was significant opposition to any site that includes SSF.*

- *Impact on/of neighbouring properties – surrounding farms are already in close proximity to residences and schools and, with the existing controls required to manage these interfaces and an appropriate master planning response, agricultural activities will not significantly impact on hospital operations or be significantly impacted by it. A full Land Use Conflict Risk Assessment has been undertaken as part of the planning submission.*
The master plan will position the hospital on the broad plateau towards the centre of the site, which is away from the short section of site frontage that has farming activities on the opposite side of the road. The master plan will maintain landscaping screening along the southern site road boundary to help provide an additional buffer.
- *Flooding considerations – the site has 16 ha of land above the PMF level and its immediate access roads are also above the PMF. The site is also opposite Kingscliff TAFE, a well-equipped evacuation centre identified in regional flood and disaster planning and used by nearly 600 people in the 2017 floods.*
- *Ecological considerations – the northern part of the site supports and is adjacent to mapped Coastal Wetlands under the Coastal Management SEPP. Some parts of the hospital campus may also abut/ overlap mapped Proximity Area for Coastal Wetlands. Civil engineering review of the 'test fit' master planning options indicate that the facility can be delivered with appropriate controls on the quality and quantity of surface and groundwater flows to the adjacent wetland. There is also the opportunity to improve stormwater runoff quality from current farming activities in terms of sediment impact.*
Koala Habitat Class 2A and broad-leaved paperbark have been identified in the northern part of the site and fall under the Biodiversity Conservation Act (State legislation). However, ecological constraints are not present in the proposed location of the hospital development.
- *Bushfire – buffers and Asset Protection Zones (APZ) have been considered during initial master planning to accommodate expansion and growth of the hospital. These buffers overlap with planned greenspace, amenity and future road access, as well as environmental buffers and can be used to enhance the healing environment and overall amenity of the campus.*

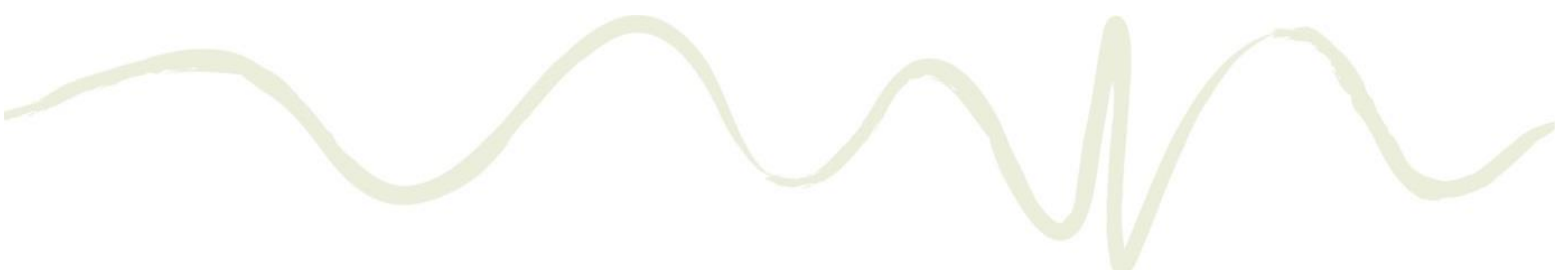
Time, Cost and Value

- *Land acquisition – the site is privately owned and was put forward by the landowner in response to the EOI process. The negotiation and site acquisition process will be undertaken in accordance with the Land Acquisition (Just Terms Compensation) Act 1991.*
- *Existing utilities - major utilities (including electricity, telecommunications, sewer, reticulated water supply and drainage infrastructure) are available in close proximity to the site.*
- *Enabling works – utilities connections and road upgrades to Cudgen Road from and including the intersection with Tweed Coast Road will be required.*
- *Potential capital cost – based on draft planning, assessment of the overall capital cost for developing the hospital on this site indicates that it is affordable within the allocated capital budget for the project."*

Further, the feasibility of not carrying out the development has also been considered in the Service Statement, which notes the urgent need for additional health and clinical services in the Tweed-Byron region. Section 1.2 of the Service Statement notes:

- ***"Demand for health services in the Tweed Valley exceeds current supply: Hospital occupancy rates of 100 percent or more indicate that TTH has reached capacity."***
- ***"Demand for health services closer to home: There is increasing demand by a growing and ageing population for more specialised health services to be provided closer to home."***

Section 2.2 of the Service Statement summarises the key indicators that demonstrate the demand is presently exceeding supply:

- 
- *“TTH occupancy was 110 percent in 2017/18.*
 - *Surgical and Medical Overnight beds are operating at capacity.*
 - *TTH ED reached 53,140 ED presentations in 2017/18, a 26 percent increase since 2012/13, representing a 4.3 percent annualised growth and activity exceeds current infrastructure capacity.*
 - *Kurrajong, the 25-bed adult inpatient Mental Health Unity at TTH was operating at 96 percent occupancy in 2017/18 and previous year was 103 percent.*
 - *Demand for Chemotherapy treatment capacity exceeds current supply of 13 chairs.*
 - *The range of Cancer and Radiotherapy services are limited and community is travelling further to access cancer services.*
 - *Despite all the clinical redesign initiatives and winter management strategies, the winter period resulted in increased length of stay in ED and delays in emergency surgery due to lack of inpatient care.”*

The Tweed Valley Hospital has been developed for the purpose of meeting the current urgent demand for additional health services in the Tweed Byron Region, and to accommodate the growing demand for health services in future. Section 6.2 of the Service Statement outlines the key services that the Proposed Hospital will provide, which will include, and notes that it will be the only facility in the Tweed Byron network that will provide emergency operating theatres for all surgery, intensive care, coronary care, and a range of diagnostic services available 24 hours a day. The expected benefits of the Tweed Valley Hospital are numerous, but critically the hospital will provide much needed health service capacity to meet increasing demand for health services of a growing and ageing population. The longer the project is delayed, the longer the Tweed-Byron Community will be deprived of the expected benefits of the proposed hospital.

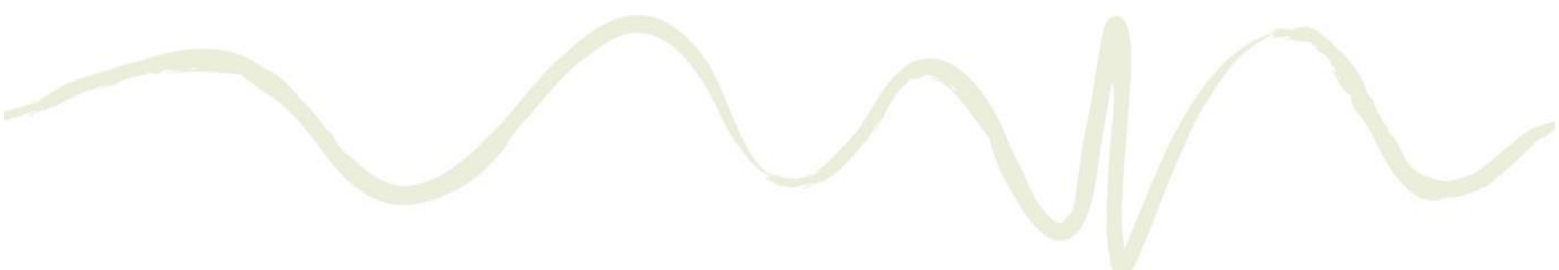
For these reasons, a hospital in the Tweed-Byron region was considered to be essential for the provision of health services to the community, and the Project Site was determined to be the best location for that hospital.

It is noted that these reasons for the urgent provision of health services were confirmed and supported by the Supreme Court judgement in the matter of Duane John Joyce and Kerry Douglas Prichard v Health Administration Corporation, Minister for Health and Minister for Finance, Services and Property No. 2018/329307.

The existing TTH site should be redeveloped. A previous master plan was prepared for this site, and that work should not be abandoned.

Several issues relate to the decision to locate the hospital on a greenfield site:

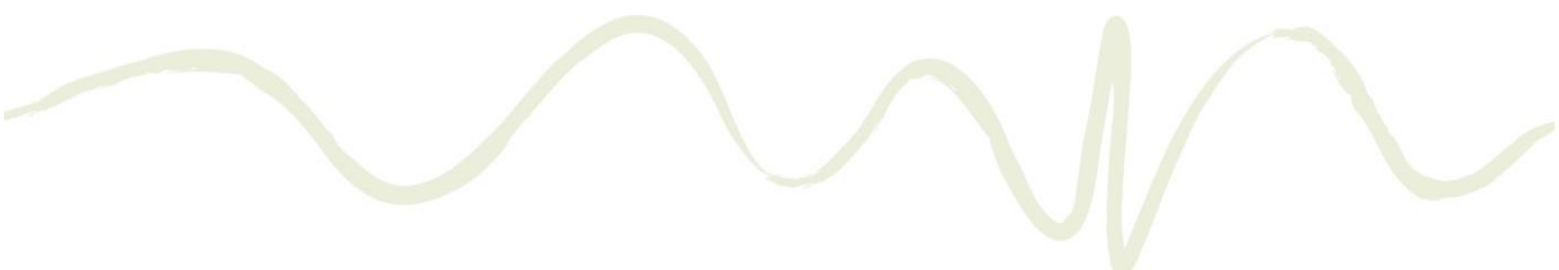
- Master planning studies to redevelop TTH were conducted in 2013 and 2016. Both studies contemplated the re-use of existing building stock (built between 1972 and 2007) and new-build limited by available space. Master plans were reliant on a staged build and decant program, noting challenging operational issues during the lengthy construction program, including: noise; vibration; and access restrictions.
- The previous master planning studies referred to by submitters contemplated a limited planning horizon, exclusive of a further expansion or building renewal strategy. The master planning studies demonstrate the capacity restrictions of the current site in terms of delivering contemporary models of care, contemporary learning and research capability, technological innovation and sufficient built infrastructure to meet the needs of a growing and ageing population.

- 
- A design study was completed on the existing site of TTH, which considered acquiring land around the existing TTH; building the Tweed Valley Hospital; decanting services and demolishing the existing buildings; and then using the existing site for future expansion and complementary uses. This comparison study reaffirmed that the redevelopment around the TTH was not a viable proposition.
 - Assessment of the overall capital cost for developing the hospital at TTH indicates that it is unaffordable. The major cost factors are the requirement for an engineered solution to provide suitable flood immunity and the likely land acquisition costs. The estimated overall cost impact is up to 20 percent of the construction cost of the Tweed Valley Hospital, which would significantly impact on the budget available to build clinical space.
 - The Tweed Valley Hospital will be a major referral hospital at the heart of the network of hospitals and community health facilities located across the Tweed-Byron region. The need for the Tweed Valley Hospital is driven by:
 - The significant forecast population growth in the Tweed-Byron region, and in particularly the increase in the ageing population.
 - The need for the health services in the Tweed-Byron region to be more self-sufficient, to give residents access to more services locally, without travelling outside the region.
 - The need to implement modern healthcare models, to deliver high quality health services into the future
 - The constraints of current infrastructure at TTH, which is at a capacity
 - The physical limitations of the existing TTH site, which has inadequate space to develop new buildings and access is impacted by flooding.
 - The existing TTH is located at the far north of the Tweed LGA, which does not provide equitable access for the Tweed-Byron population. Despite being readily accessible to the residents of Tweed Heads, any residents attending from within the southern part of the catchment area have considerable travel distances in order to attend their major referral hospital. The location of TTH at the far northern end of the catchment also maximises the distance for hospital transfers from Byron Central Hospital (BCH) and Murwillumbah District Hospital (MDH).
 - Flooding is a key risk across the Tweed Valley region and ensuring that the major population centres retain access to acute hospital services under 5% and 1% Annual Exceedance Probability (AEP) (also referred to as Q20 and Q100) flooding events are important considerations. TTH sits approximately two to three metres below the Probably Maximum Flood (PMF) level. Retention of access to TTH during a major flooding event is a key issue for TTH, as was demonstrated during the 2017 floods, during which the existing and growing population centres to the south of Tweed River became cut off from access to the full range of acute hospital services.
 - This emphasises the need to consider equitable access arrangements, and the advantages of a more central location for the Tweed Valley Hospital in relation to the broader Tweed-Byron region. It is noted that residents from the areas to the north of the Tweed River would be able to access Robina Hospital within approximately 30 minutes in a flooding event.

3.2.1.3 Planning Pathway

Fast tracked planning pathway.

The planning pathway was informed by due diligence and consultation with DPE. The pathway is in accordance with relevant provisions of the EP&A Act (as outlined in the EIS (Section 5.1) and below).



The draft SEPP and rezoning process is being undertaken and administered by DPE and is specific to the Project Site. The planning controls proposed are consistent with the Standard Instrument – Principal Local Environmental Plan (Standard Instrument), the approach for other health projects and hospital sites, as determined by DPE.

This process is outlined below.

In terms of permissibility, the Project Site's existing 'RU1 Primary Production' land use zone pursuant to the Tweed Local Environmental Plan (TLEP) 2014, applicable to the majority of the Project Site, prohibits health services facilities. The 7(l) Environmental Protection (Habitat) zone and 1(b1) Agricultural Protection zone of the TLEP 2000 (occurring along the northern boundary of the Project Site) also prohibit a health services facility. A health services facility is permissible within the 'R1 General Residential' zone and 2(c) Urban Expansion zone, applicable to a small area of the Project Site.

Pursuant to Section 4.38(2) of the EP&A Act, development consent cannot be given to an SSDA that is wholly prohibited by an Environmental Planning Instrument (EPI). However, pursuant to Section 4.38 (3) of the EP&A Act, it can be given to a partially prohibited development.

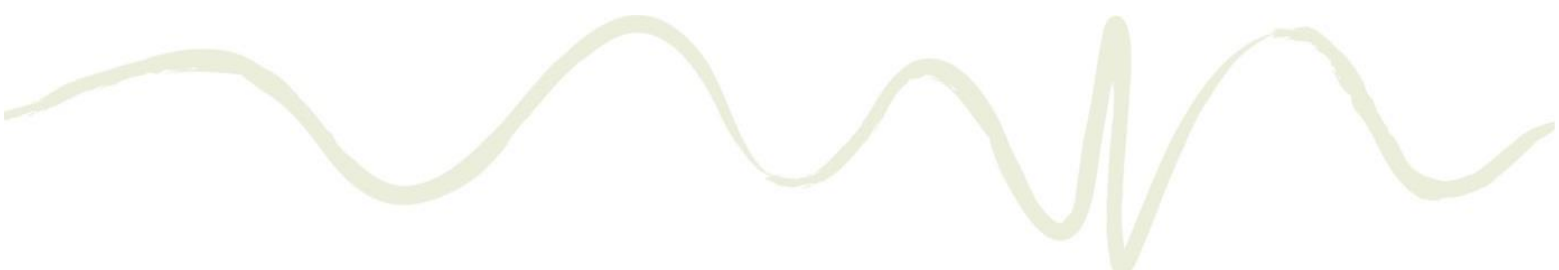
Notwithstanding this, Section 4.38(5) of the EP&A Act provides that a development application in respect of a SSD, that is wholly or partly prohibited, may be considered in conjunction with a proposed Environmental Planning Instrument (EPI) to permit the carrying out of the development.

To enable the determination of this SSDA, DPE has prepared a new draft SEPP, pursuant to Divisions 3.2 and 3.3 of the EP&A Act that would amend 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. It is proposed that the SEPP would be repealed after the TLEP 2014 has been amended.

It is proposed that the draft SEPP and SSDA be considered and determined in accordance with Division 3.5 and Section 4.38(5) of the EP&A Act. The SSDA, would be considered in conjunction with the proposed EPI (in this case a site-specific SEPP) to permit the carrying out of the wholly or partly prohibited development on the subject land. Pursuant to Clause 3.40 of the EP&A Act, the SSD and SEPP were exhibited simultaneously.

On this basis, the SSDA would be determined using the new planning controls facilitated by the site-specific SEPP that amends the LEP, that include:

- Majority of the Project Site (RU1 Zone and sliver of R1 Zone at the eastern end) to be rezoned to SP2 Infrastructure
- No change is proposed (under the draft SEPP by DPE) to the zoning on the remainder of the Project Site (i.e. deferred matters of the TLEP 2014). This includes the vegetated environmental areas, zoned 7(l) Environmental Protection (Habitat) under the TLEP 2000 and mapped as Coastal Wetlands under the Coastal Management SEPP. This vegetated area would be preserved outside of the development area to protect the environmental biodiversity and provide views and amenity for the hospital.
- No provision of prescriptive building height, FSR or minimum lot size (i.e. applications would be assessed on merit) would apply to the land to be rezoned SP2 Infrastructure. Any such current provisions would be removed.



Such planning controls are consistent with the Standard Instrument and the typical approach for other health facility/ hospital sites, and therefore the planning process followed has followed the correct process.

The Project is a “hospital” with a capital investment value greater than \$30 million. Accordingly, pursuant to clause 14 of Schedule 1 of the SEPP (State and Regional Development) 2011 (SRD SEPP), the project is SSD and required the preparation of an EIS (in accordance with Section 4.12(8) of the EP&A Act).

3.2.2 Early and Enabling Works

The inclusion of bulk earthworks, piling, permanent culvers and roadworks, and stormwater and drainage networks should not be included in the Stage 1 EIS as they require detailed design.

The inclusion of the Stage 1 Early and Enabling Works in the SSD concept development application is consistent with the provisions of the EP&A Act. Section 4.22 of the EP&A Act states that:

*(1) For the purposes of this Act, a **concept development application** is a development application that sets out concept proposals for the development of a site, and for which detailed proposals for the site or for separate parts of the site are to be the subject of a subsequent development application or applications.*

(2) In the case of a staged development, the application may set out detailed proposals for the first stage of development.

The inclusion of the Stage 1 Early and Enabling Works within the SSD concept application is a legitimate practice that is consistently used for other developments including but not limited to hospitals.

A detailed design of the Stage 1 Early and Enabling Works has been prepared and has been included in the SSDA. These works are comprehensively assessed within the EIS (refer Section 6) as was required by the SEARs.

A preliminary Construction Environmental Management Plan (CEMP) has been provided (refer Appendix G of the EIS) as was required by the SEARs. A detailed CEMP, including relevant sub-plans, would be prepared and implemented by the Stage 1 contractor in accordance with relevant standards. This would be required as a condition of the SSD consent. This is standard practice for SSDA.

The preliminary CEMP requires that the contractor prepare detailed strategies for site operations sub-plans and staging. These are issues that require detailed design and should not be included in the Stage 1 EIS.

The inclusion of the Stage 1 Early and Enabling Works in the SSDA is consistent with the provisions of the EP&A Act. Section 4.22 of the EP&A Act states that:



(1) For the purposes of this Act, a **concept development application** is a development application that sets out concept proposals for the development of a site, and for which detailed proposals for the site or for separate parts of the site are to be the subject of a subsequent development application or applications.

(2) In the case of a staged development, the application may set out detailed proposals for the first stage of development.

The inclusion of the Stage 1 Early and Enabling Works within the SSDA (that also seeks approval for a Concept Proposal) is a legitimate practice that is consistently used for other developments including but not limited to hospitals.

A detailed design of the Stage 1 Early and Enabling Works has been prepared and included in the SSDA. These works are comprehensively assessed within the EIS (refer Section 6) as was required by the SEARs.

A preliminary CEMP has been provided (refer Appendix G of the EIS) as was required by the SEARs. A detailed CEMP, including relevant sub-plans, would be prepared and implemented by the Stage 1 contractor in accordance with relevant standards. This would be required as a condition of the SSD Consent. This is standard practice for SSDA. The detailed CEMP is therefore able to account for factors such as detailed design, final plant selection and construction methodologies. The detailed CEMP would require preparation and approval prior to commencement of works. CEMPs are reviewed and updated throughout the project life cycle as required.

3.3 SEAR 2 - Policies and Strategic Context

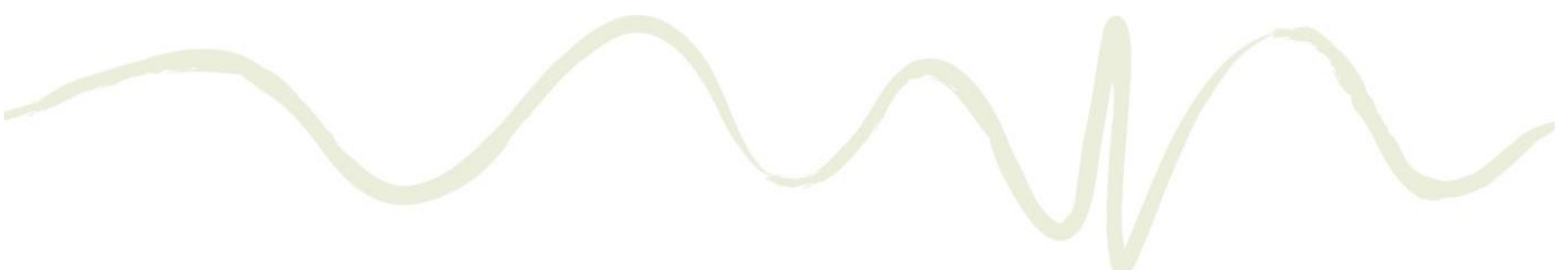
The proposal is inconsistent with the NCRP 2036, prepared in 2017. It shifts the hospital away from Tweed Heads to Kingscliff.

The NCRP 2036 was prepared at a time that a funding commitment for the new hospital was not present.

Following completion of the NCRP 2036, detailed health services planning for the region was undertaken, identifying the need for a substantially more significant facility than previously envisaged.

During the 2017 floods, retention of access to TTH during a major flooding event was emphasised as a key issue for TTH, during which the existing and growing population centres to the south of Tweed River became cut off from access to the full range of acute hospital services. This emphasised the need to consider equitable access arrangements, and the advantages of a more central location for the future Tweed Valley Hospital in relation to the broader Tweed-Byron region.

Based on this position, on 13 June 2017, the NSW Government announced \$534 million for a new state-of-the-art hospital on a greenfield site (referred to as the Tweed Valley Hospital), including an expanded emergency department, inpatient care and enhanced surgical and outpatient services. New services, including interventional cardiology and radiotherapy, will also be provided in response to clinical service planning priorities. At this point it was determined that this could not be delivered within the existing location of TTH.



The 2018/19 State Budget confirmed a \$582 million investment in health for the Tweed-Byron Local Government Areas (LGAs), which will deliver the Tweed Valley Hospital as well as interim upgrades at the existing TTH.

Delivering this substantially expanded commitment to health infrastructure for the Tweed-Byron region drove the requirements to identify a larger, greenfield site, centrally located to the broader community and drove the change to what was previously envisaged by the North Coast Regional Plan.

Further, it is not considered that the project is in direct conflict with the NCRP 2036. The EIS identifies various ways where the project will directly contribute to the facilitation of the Goals and Directions outlined in the Plan (refer Section 5.2.3). It also acknowledges the inconsistencies that, like many large-scale developments, can exist with these types of Strategic Plans. However, as stated in the EIS, it is considered that, on balance, the Project is acceptable in the overall context of the NCRP 2036.

The NCRP 2036 states that the coastal settlements of the Tweed Shire have experienced some of the strongest growth on the North Coast. The popularity of the Tweed Coast is expected to continue into the future, particularly as opportunities for Greenfield housing on the Gold Coast become more limited. Kingscliff will be an important centre in this regard and will service the growth of the Tweed Coast's network of villages and towns. NCRP 2036 also identifies the need to "deliver housing in Kingscliff, Cobaki, Bilambil, Terranora, and Kings Forest" and "enhance housing diversity by increasing the number of homes in Tweed Heads, Kingscliff, Cobaki, Kings Forest and Dunloe Park".

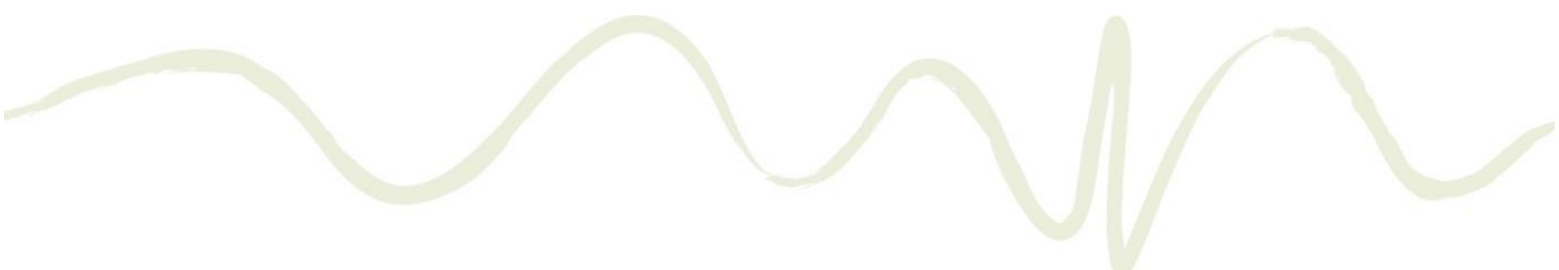
This indicates the important and evolving role of Kingscliff for the Tweed Region. Such attributes and future growth provide strong strategic planning support for the development of the Tweed Valley Hospital within this immediate locality. This allows health services, including the Tweed Valley Hospital, to be established in the context of an existing and growing urban area, supported by existing and planned infrastructure and an urban setting that will deliver more housing, jobs, and services.

The strategic siting of the Tweed Valley Hospital immediately adjacent to the existing education precinct provides an excellent clustering of health and education land uses and significant potential for partnerships and delivery of an integrated precinct over time. Future clustering of research and educational institutions is a key socio-economic benefit, sound land use planning, and is consistent with the NCRP that seeks to facilitate economic activity around industry anchors such as health and education by delivering new infrastructure that encourages and results in clusters of related activity.

It is also noted that many of the hospital upgrades that are proposed or currently under construction in northern NSW are not mentioned in the NCRP 2036. For example, the Coffs Harbour Hospital Expansion and the new Macksville Hospital for which early works have commenced are not mentioned in the Plan. This recognises the inherently iterative nature of planning, and the ability of the NCRP 2036 to respond to change within our communities.

The proposal is inconsistent with the Kingscliff Locality Plan, and Tweed Local Environmental Plan specifically the suggested three storey height limit. This will impact the character and amenity of Kingscliff, with associated financial cost and social impact.

The Tweed Valley Hospital project would result in the loss of approximately 16 ha of mapped SSF. A review of the SSF mapping, undertaken by the project team, indicates that the total area within the Cudgen Plateau mapped as SSF is approximately 580 ha and not the 530 ha as referenced in the submission. A reduction in the SSF of 16 ha would not reduce the area to less than 500 ha. The



NRFPP and Local Planning Directions include provisions to protect SSF from residential and urban development, with the only exception being for public infrastructure that has been supported by a thorough review of alternative sites. The project is for a public purpose/ infrastructure and the site was deemed the most suitable and feasible option on the basis of an extensive review of potential sites.

In relation to the three-storey height limit in Kingscliff, the draft SEPP and rezoning process by DPE, undertaken simultaneous to this SSDA, is specific to the Project Site and will ensure that the rezoning of the Project Site to SP2 Infrastructure does not have any unintended consequences beyond the Project Site.

The zoning and land use controls will be specific to the development of a hospital, as an SSD, on the Project Site, and will not apply to any other site. On this basis there would be no further incremental or cumulative impact, or changes to height beyond the Project Site.

In relation to character, the KLP currently indicates that the Project Site is located in the Green Edge Precinct. This precinct acknowledges the importance of surrounding farmland, the landscape character and views. Strategies articulated within the KLP include that new development incorporate adequate buffers within development sites and consider the visual character of the locality. As outlined in Sections 5.3, 5.4 and 8 of the EIS, the Project has had due regard for these aspects, amongst others. In terms of the Project Site itself being within the Green Edge Precinct of the KLP, the proposed rezoning of the land would designate it for the proposed land use change to SP2 Infrastructure, as supported via a site-specific SEPP.

The draft Kingscliff DCP includes planning and design principles, objectives and development controls. The project and this EIS have considered a comprehensive range of matters, including visual amenity. Section 8 of the EIS provides the environmental risk assessment of the Project, with Section 5 providing a comprehensive assessment of the Concept Proposal, with the following key responses to potential visual impact:

- The Concept Proposal and identified planning envelope has been sited/ arranged to balance the impact of height and bulk with the clinical and functional requirements of a hospital. There are substantial setbacks from surrounding properties and viewpoints, while at the higher levels the massing of the building reduces and there is increasing articulation, resulting in reduced visual impact of the building.
- Pristine coastal views would not be impacted.
- The Stage 2 EIS will develop a design response appropriate to the site context and operational needs, as well implementing recommendations of the Visual Impact Assessment based on the Concept Proposal.

As outlined later in this Submissions Report (Section 5), some minor changes to the project and Concept Proposal are proposed as a result of the exhibition process and responding to submissions. Whilst still under development, consolidation of the block and stack arrangement has enabled the anticipated overall facility envelope to be further defined. The resultant reference envelope has seen a marked reduction in the overall volume when compared to the previous submittal. This responds to concerns regarding the potential size and associated visual impact of the hospital building which is to be designed and articulated within the proposed maximum planning envelope at Stage 2. It is anticipated that the facility envelope will continue to be reduced through the schematic design process (Stage 2).



3.3.1 Hospital Study Area

It is questioned why the hospital name was changed to Tweed Byron Hospital, quoting the statement “The site selection process identified this site as the most suitable location for a major referral hospital serving the Tweed-Byron Community. It is questioned what will happen to the Byron hospital. The EIS has not considered the traffic impacts or locational benefits for the people of Byron Bay.

The submitters have incorrectly interpreted the statement. The hospital name remains unchanged as the Tweed Valley Hospital, noting that it serves the community of the Tweed-Byron Region. This refers to the LHDt, and is not limited to only Byron Bay.

The Tweed Valley Hospital will be a major referral hospital as a key part of the NNSW LHD. It forms part of the network of hospitals and community health centres that include Lismore Base Hospital, Murwillumbah District Hospital, Byron Bay District Hospital, Pottsville Community Health Centre and others. Under current health network planning, the role of these hospitals and health centres will remain unchanged.

Health services planning considers the range of hospitals and medical facilities as an integrated network, of which the Tweed Valley Hospital will be the highest level of care within the Local Health District. The need for this within the region has been published on the Tweed Valley Hospital Development project website since project inception.

With regard to traffic, the traffic impact assessment has been prepared based on the number of trips typically associated with a hospital of this size, and in a regional location, and therefore incorporates potential trips from Byron Bay, as currently occurs to Tweed Hospital or further into Queensland.

The site was confirmed as the only feasible option through the separate and now concluded site acquisition process.

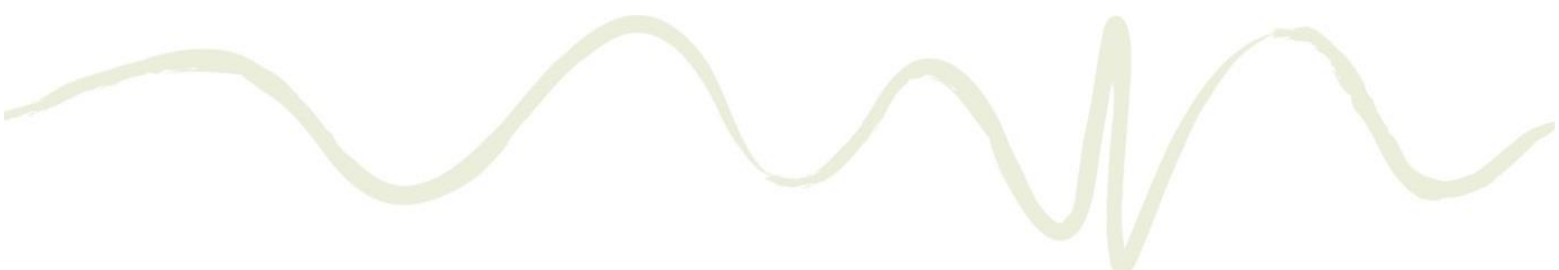
3.4 SEAR 3 – Built Form and Urban Design

3.4.1 Site Layout

The site slopes, and this is not optimal for the development of a hospital where users may have mobility constraints.

The Concept Proposal presents a Masterplan arrangement for the Project site, with maximum planning envelopes proposed for the main buildings on the site within this arrangement. These envelopes do not represent actual built form, but rather the envelopes/parameters within which the built form would be established as design development is ongoing.

The Masterplan presents a future health precinct sited around the main hospital building envelope which is situated toward the centre of the site, at the northern end of the site’s natural plateau. The main building, set-down and forecourt are sited parallel to Cudgen Road. The proposed design integrates built form into topography. 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.



A building platform will be created ensuring each building storey is level, while the slope of the land will be used to achieve entries at different levels for optimal clinical and operational functionality, and build two levels of the building below the main entry level viewed from Cudgen road.

The building will be designed to ensure maximum clinical outcomes, informed by the 34 Project User Groups. This includes access and circulation that meets clinical requirements, as well as complying with *Disability Discrimination Act 1992* (Cth) (DDA) requirements for access to public buildings.

3.4.2 Construction Environmental Management Plan (CEMP) Comments

Will trees be retained to ensure the north south connectivity for Koalas is retained?

Vegetation to be removed as part of the development associated with the SSDA has been identified in the Biodiversity Development Assessment Report (BDAR), including those areas identified for ongoing landscaping.

Vegetation within the development footprint has been treated as a total loss in the submitted BDAR and the Biodiversity Assessment Method (BAM) Calculator.

The proposed development has been specifically sited within an area of the Project Site that is largely cleared and would not significantly impact flora or fauna. Surveys conducted by Health Infrastructure's advisors did not find any evidence of Koala habitation on the site and on that basis the Project is not considered to impact on Koala habitat.

The establishment of a 10 m wide vegetated buffer along the western boundary has been proposed and the location is detailed in the Landscape Masterplan.

The BDAR and BAM Calculator has been updated to describe vegetation in Zones 4 and 8 as 'Self-sown windrow' and in Zones 5 to 7 as 'Planted windrow'.

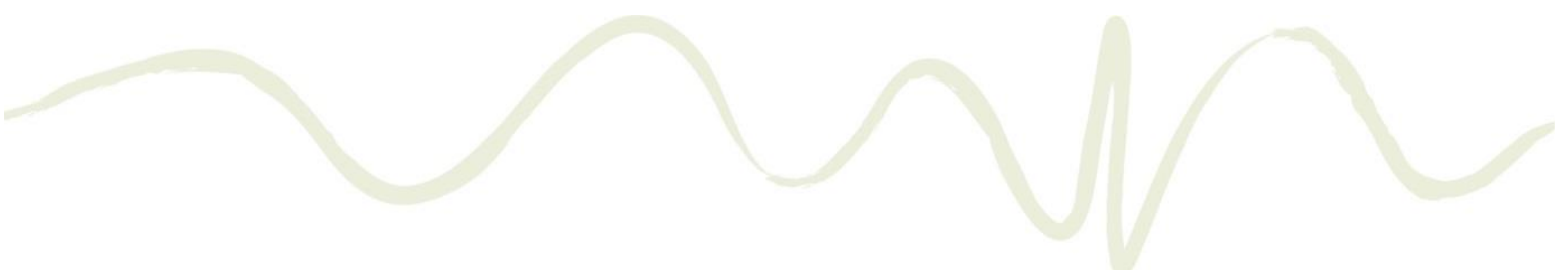
3.5 SEAR 4 - Environmental Amenity

3.5.1 Visual Impact and Amenity

The multi-storey building in this location will impact on visual amenity

The draft Kingscliff Development Control Plan (DCP) includes planning and design principles, objectives and development controls. DCPs are not specifically applicable to SSD. Nonetheless, the project and the EIS have considered a comprehensive range of matters, including visual amenity. Sections 5 and 6 of the EIS provides the environmental assessment of the project (Concept Proposal and Stage 1 Early and Enabling Works). Appendix K of the EIS provided a detailed visual impact assessment of the Concept Proposal with the following key responses to potential visual impact:

- The Concept Proposal and identified planning envelope has been sited/ arranged to balance the impact of height and bulk with the clinical and functional requirements of a hospital. There are substantial setbacks from surrounding properties and viewpoints, the envelope has taken



advantage of the topography to reduce perceived height, and at the higher levels the density of the envelope and future resultant massing of the building reduces and increasing articulation would reduce visual impact of the building.

- Pristine coastal views would not be impacted.
- Although the proposed development would be an obvious modification to the Project Site and affect the quality of various view frames, all assessed view frames would maintain a reasonable visual amenity standard. The most affected view frames would still retain well rated views and appreciable distant views of natural landscape features, including bushland, hinterland and ranges.
- It is important to note that the assessment is based on a worst-case scenario of the proposed maximum planning envelope, prior to detailed design and articulation of built form, which would occur at Stage 2.

The EIS for the Stage 2 SSDA will develop a design response appropriate to the site context and operational needs, as well as implementing recommendations of the Visual Impact Assessment based on the Concept Proposal.

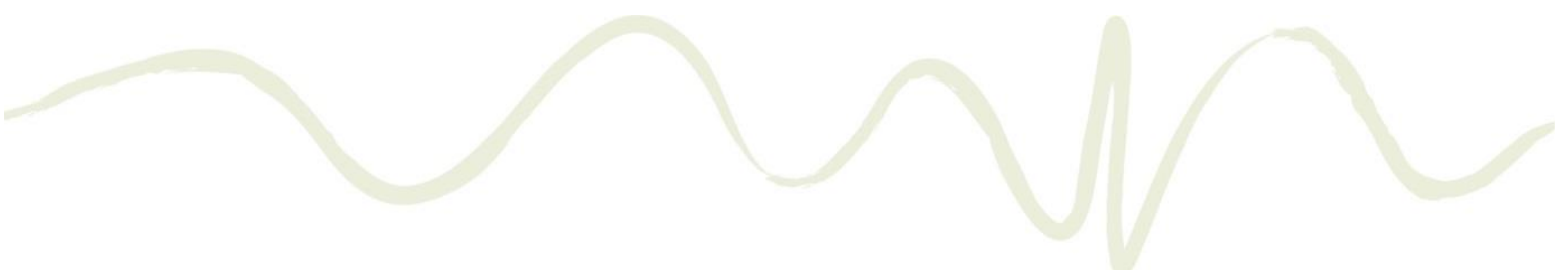
As outlined in Section 5 of this Submissions Report, some changes to the project and Concept Proposal are proposed. Whilst still under development, consolidation of the block and stack arrangement has enabled the anticipated overall facility envelope to be further defined. The resultant reference envelope has seen a marked reduction in the overall volume when compared to the previous submittal. This responds to concerns regarding the potential size and associated visual impact of the hospital building which is to be designed and articulated within the proposed maximum planning envelope at Stage 2. It is anticipated that the facility envelope will continue to be reduced through the schematic design process (Stage 2). A further indication of this (which is indicative and subject to change and detailed design for Stage 2) is shown in the revised plan package at **Appendix B**; drawing AR-SKE-51-003 illustrates a “work in progress” building form being developed within the maximum planning envelope.

As detailed in the Visual Impact Assessment undertaken, and in the Built Form and Urban Design Report, the Concept Proposal attempts to minimise impacts on the visual landscape of the Cudgen district and local receivers by reducing height, providing increasing articulation and reducing density in the upper zones of the envelope (further demonstrated in the revised plans attached), and presenting generous setbacks. The draft SEPP and resulting rezoning to SP2 Infrastructure would enable the project to comply with the primary planning controls relevant to the Project 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 EIS has not adequately assessed the site layout and impacts of a nine-storey building on surrounding vistas. It ignores stated negative impacts to skyline views and the scenic value of the area.

The application and supporting EIS is for a Concept Proposal of the Tweed Valley Hospital and Stage 1 early works. The Concept Proposal includes a maximum envelope for the hospital and a smaller maximum envelope for a support building set amongst a concept masterplan.

As outlined in the Visual Impact Assessment (VIA), the assessment is based on the probable visual impacts of the Concept Proposal for the Tweed Valley Hospital Project. This is based on the maximum planning envelopes, prior to the finalisation of built form and detailed design (which would occur at



Stage 2). At this stage detailed design of the Tweed Valley Hospital is not available as design development is ongoing. A separate SSDA will be prepared to assess impacts associated with Stage 2, which is expected to involve the hospital detailed design, main works and operation.

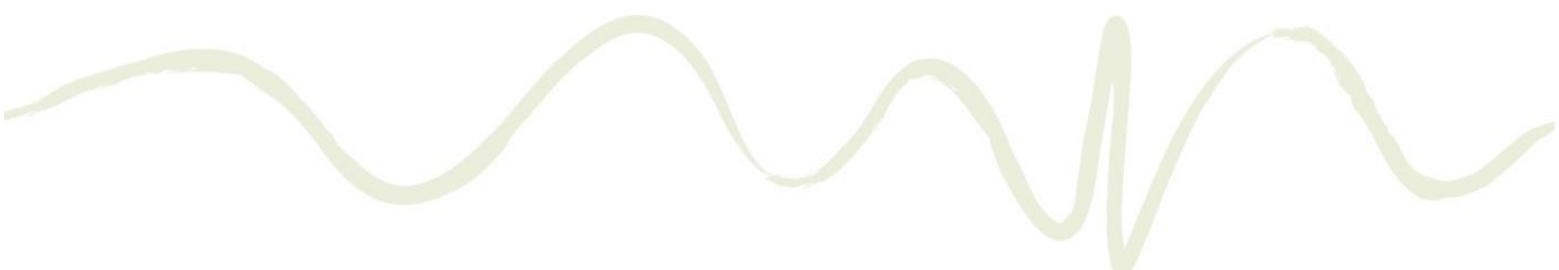
However as mentioned previously, in response to submissions and design refinement (refer to Section 5 for detail), ongoing design development has resulted in some consolidation of the block and stack arrangement and enabled the anticipated overall facility envelope to be further defined. The resultant reference envelope has seen a marked reduction in the overall volume when compared to that submitted. This responds to concerns regarding the potential size and associated visual impact of the hospital building which is to be designed and articulated in detail within the proposed maximum planning envelope at Stage 2. It is anticipated that the facility envelope will continue to be reduced through the schematic design process (Stage 2). A further indication of this reduction (which is indicative and subject to change/detailed design at Stage 2) is shown in the revised plan package at **Appendix B**; drawing AR-SKE-51-003 illustrates a “work in progress” building form being developed within the maximum planning envelope.

It is important to note that the maximum planning envelope does not represent built form or actual massing or storeys (although general reference to the anticipated building arrangement and levels is provided in text within Section 3.1.6 and 5.3 of the EIS. Rather the maximum envelope represents parameters within which, through the detailed design process, the building and form would be developed and articulated. The envelope’s anticipated zonal densities (refer to revised plans at **Appendix B**) 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 and is not representative of the actual final built form.

Ten key and representative view frames from various locations, elevations, and distances were considered, along with the overall context and scenic quality of the locality and the broader Cudgen District. The impact of the maximum planning envelope, including its maximum height, has been assessed and its outline is shown in the montages prepared for the assessment of the Concept Proposal. These montages have also been revised and included in the attached plan set to reflect the changes to the maximum planning envelopes. The view frames assessed are considered to be reasonable and representative of key views and vistas experienced from different aspects of both the public and private realm. The VIA has had adequate regard for the potential impact based on the limitation of assessing a Concept Proposal, prior to detailed design and development of the form, massing and articulation. The level of detail presented, and assessment undertaken is consistent with various other concept proposal examples for SSD and is common practice for such proposals, with additional assessment provided at subsequent stages.

As part of the VIA, a range of factors that can influence visual impact were considered in assessing the impact. This included, but was not necessarily limited to, visual quality, visual sensitivity, distance, skyline projection, key vistas or landmarks, and the scenic or visual quality of the broader context within which the project is sited. Such factors have been given due regard, including assessment of visual quality pre and post the Concept Proposal.

Given the nature of the Concept Proposal, form and massing cannot be assessed at this stage as the maximum envelope represents a worst-case scenario. Reinforcing this, the VIA did not specifically assess the reduced zonal densities shown on the concept plans at upper levels of the envelope. The assessment acknowledged this fact with regard to future design development, however was based on the outline of the maximum planning envelope. This indicates that the potential visual impact of the Concept Proposal’s maximum planning envelope would typically be markedly greater than the actual hospital building to be presented and assessed at Stage 2, as this subsequent stage would take into account form, mass, articulation, materials and finishes etc, amongst other things.



Additional assessment, including photomontages and perspectives of the proposed development, based on the actual proposed built form and massing (key aspects of the design - that are to be developed for Stage 2 and that influence potential visual impact) when viewed from various viewpoints, would be provided as part of the Stage 2 assessment and SSDA. This would include a comprehensive Stage 2 VIA of the proposed built form.

The established view frames in the VIA prepared for the Concept Proposal would be revisited as the design develops through schematic design, and where deemed necessary, further views of significance be identified and included within the abovementioned subsequent VIA, which will be submitted with the Stage 2 SSDA.

On this basis, the VIA for the Concept Proposal is considered to be acceptable and adequately assesses the Concept Proposal, with further detailed assessment to form part of Stage 2.

Health Infrastructure notes that ongoing media placement of Gold Coast University Hospital (GCUH) on the Tweed Valley Hospital site is both misleading and confusing. GCUH is almost three times the footprint of the proposed Tweed Valley Hospital and located in a primarily urban environment resulting in a distinctive architectural vernacular that does not reflect the Tweed Valley Hospital project.

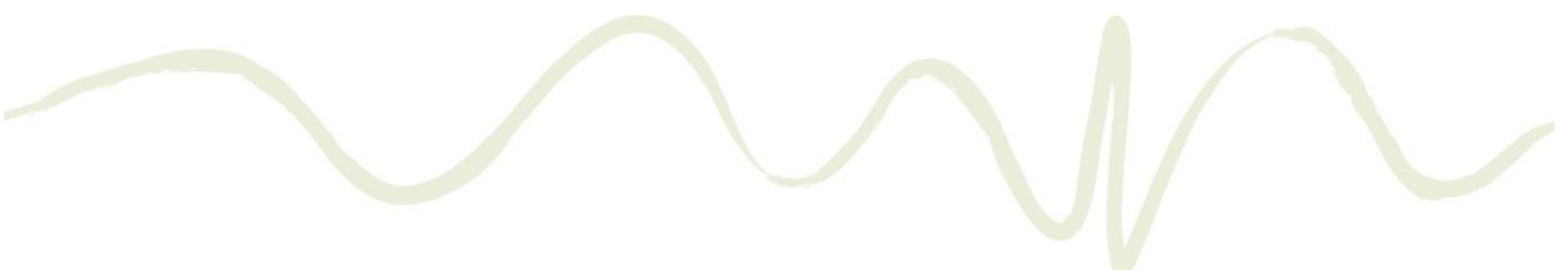
The Visual Assessment report addresses “probable visual impacts of the concept proposal” based on “a maximum planning envelope prior to the finalization of built form and detailed design” (Built Form and Urban Design Report).

The assessment is based on the Concept Proposal that identifies a maximum planning envelope, without final forms or detailed design being available. Therefore, actual form and massing cannot be assessed at this stage and the maximum envelope represents a worst-case scenario of probable impacts. This is common practice for assessing Concept Proposals of this nature. Additional VIA would be undertaken for Stage 2 based on the form, mass and design of the proposed built form, that is to be developed within the proposed maximum envelope.

The concept proposal assessed is for a main building with a Gross Floor area (GFA) of 55-65,000 m² with a maximum envelope height of RL67.1 including helipad and lift core. The forecourt of the building is at RL28, making the bulk of the building 35 m above the forecourt and 39 m to the highest point. The exhibition document refers to a building equivalent to nine storeys.

As outlined in the EIS and VIA, the Concept Proposal is informed by service planning to 2031/32 and has an expected gross floor area in the range of 55,000 m² to 65,000 m². The originally proposed maximum planning envelope establishes a top of envelope height of Reduced Level (RL) 59.1 m, with a maximum envelope height of RL 67.1 m that includes rooftop helipad and lift core. Given the revisions to the proposed plans (Refer Section 5 and **Appendix B**) some of these heights have been amended. There is also now a marked reduction in the total volume of the maximum planning envelope for the hospital.

As outlined in the EIS, the building is anticipated to include basement, lower ground and ground levels, with five levels of occupied space above of increasing articulation and reducing building density (as indicated on the concept plans). Plant space, helipad and associated lifts would be situated on the roof of the building.



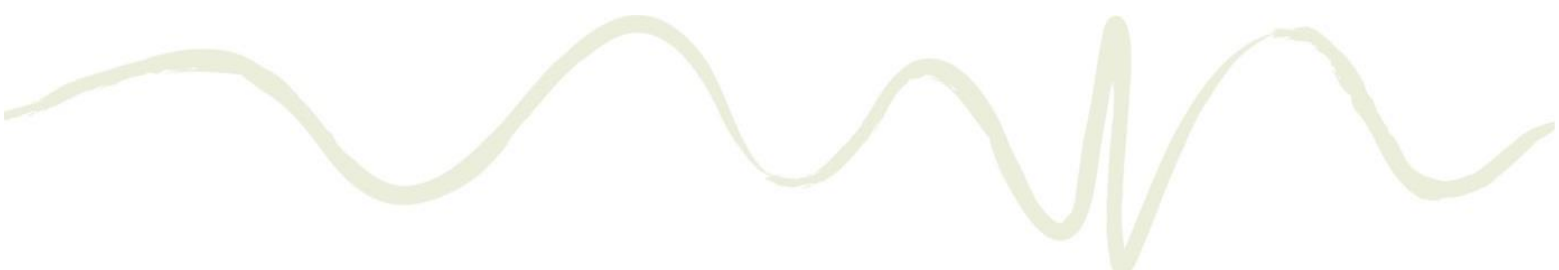
The proposal and submitted plans set out a maximum planning envelope within which the proposed starting-case hospital will be designed. The intent of the maximum planning envelope is to establish the maximum scale (width, depth and height) limits of the hospital building design, which will be entirely accommodated within this spatial volume. The EIS and supporting drawings illustrate the probable visual impact of the maximum planning envelope, defining the greatest building mass extents. However, notable reductions in building/zonal densities are indicated on the concept plans (including the revised package submitted with this Submissions Report) and occur at the upper levels and rooftop. This indicates that the actual massing of the building is expected to be notably less than the greatest extents of the maximum planning envelope. For a graphical representation of this and how the conceptual form could be envisaged to compare to the maximum planning envelope volume (which is indicative and subject to change) refer to the revised plan package at **Appendix B** - drawing AR-SKE-51-003 – that indicates a reference design subject to detailed design in Stage 2.

The building typology selected, that has resulted in the proposed maximum planning envelope, is based on important clinical and design considerations for hospitals as outlined in Section 5.3 and Appendix C (Built Form and Urban Design Report) of the EIS. The envelope has been established based on the anticipated building typology and upper levels, including helipad and lift core, of the hospital. The building typology to be developed within the envelope reflects various design requirements for the Project. Visual impact on local receivers and the scenic qualities of the locality have also been considered, with substantial setbacks provided and measures to reduce perceived height, including levels below ground and forecourt levels. The envelope has also been partly integrated into the site topography. 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.

The project architects have also indicated that while hospitals must address certain more industrial aspects of their functionality, great care will be taken at schematic design stage to ensure potentially “dominant functional features” are well placed and considered to minimise their potential negative impacts on the amenity of the hospital grounds and facility, and surrounding community visual amenity. While the hospital is proposed to be located on this prominent site, it is submitted that not all orientations of the hospital will be equally visually prominent from surrounding vantage points (as already indicated in the VIA of the Concept Proposal). For example, the primary ground level public domain interface, which includes the main hospital entrance and hospital street will be bias to the south east and east aspects of the hospital. The more utilitarian ED and logistics functions on the other hand have been discretely located on the lower ground and basement levels respectively, being located on the less visible south west orientation of the hospital. These functions are embedded in the ridge slope below the main entrance, which when complimented with appropriate landscaping will assist to conceal them from direct views from surrounding view locations and on entering the campus.

The VIA has assessed the potential visual impact based on the Concept Proposal and maximum planning envelope, without final forms or detailed design being available. Some refinement and reduction to the total envelope volumes has been submitted in response to submissions and as a result of ongoing design development and this, combined with other measures to be developed, would aid in reducing visual amenity impacts. Additional VIA would be undertaken for Stage 2 based on the actual proposed form, mass and design of the hospital, that is to be developed within the proposed maximum planning envelope.

The building envelope for the primary building is also very bulky even allowing for design articulation. The dimensions of the envelope are 150 m x 100 m given a total area of 15,000 m² (1.5 ha).



As outlined in the EIS and VIA, it is important to note that the assessment is based on the 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 design process, the building and form would be developed and articulated. A reasonably sized maximum planning envelope is necessary to allow adequate flexibility during the design process.

The envelope's zonal densities (see architectural concept plans) also indicate that final built form density would be well articulated and reduces toward the upper levels of the envelope. Hence the maximum planning envelope represents a worst-case scenario of the greatest extents, and does not account for the appreciation of building form or articulation until the design is developed and assessed at Stage 2. The detailed design response will develop and refine the built form, including massing, articulation and appearance of the building. Also refer to above comments.

There is also a secondary Support Building virtually hard on Cudgen Road. Its length to Cudgen Road is 63 m with a height of 11 m - equivalent to three storeys. There is no discussion of this building and its impacts anywhere in the Geolink report.

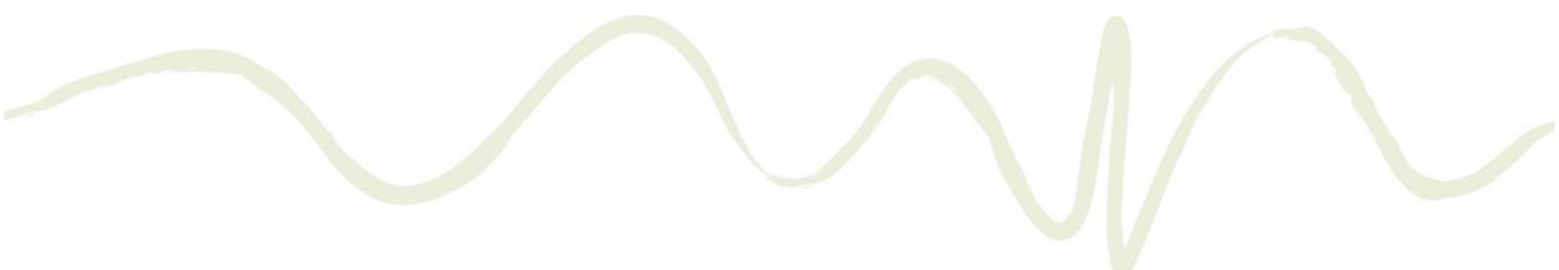
The proposed support building also forms part of the Concept Proposal and a maximum planning envelope is proposed for this building in addition to the main hospital. The envelope of the support building is not hard-edge to Cudgen Road, rather it is suitably setback from the boundary with Cudgen Road by 12 m, and 253 m from Turnock Street. The VIA considers the overall impact of the Concept Proposal, inclusive of the hospital and support building maximum planning envelopes. The support building is included in relevant plans and visual montages that accompany the EIS and VIA.

As outlined in Section 5.3.6 of the EIS, the support building fronting Cudgen Road would be of a low-rise scale and provides a suitably sensitive built form scale transition to the Project Site and interface with the public realm and frontage to Cudgen Road. As with the hospital, the support building's maximum planning envelope does not represent an actual building as this detail is not yet available and requires design development as part of Stage 2. Further assessment would occur at Stage 2.

The visual environment of the area is assessed as being at the rural/urban interface as being of Medium Value. This is despite their reference to the "Visual Management System for NSW Coast, Tweed Pilot 2004" where it is described as a "high visual quality rural landscape with low capacity for change" and their reference to the Draft Kingscliff Locality Plan and Development Control Plan which refers to the "high scenic area of the Cudgen District".

The Project Site is at the boundary of Cudgen and Kingscliff, at the rural/urban interface. The visual quality scale used in the VIA of 'low', 'medium' and 'high' is based on a 16-point scale. This scale and the methodology are described in the VIA, including the definitions/influencing factors behind the scale. The visual quality afforded to many of the existing view frames and visual environment was rated in the upper level of the medium scale, with a number at the cusp of the high scale. This acknowledges the quality of the visual environment; however, no affected views frames were assessed to be pristine or free of built environment elements or modification from its natural state.

Whilst the quality of the broader rural setting and visual environment is also acknowledged, the Cudgen district is broad and extends well beyond the Project Site. The draft KLP/ DCP, Tweed Shire Scenic Landscape Evaluation (1995) and Visual Management System for NSW Coast, Tweed Pilot (2004) identify the Project Site as being located within the peripheral northeast corner of the high



scenic value area of the broader Cudgen district. Being on the very fringe of the area, in proximity to infrastructure and urbanisation, influences the visual scale as described in the VIA.

The view frames assessed in the VIA are purposely presented in the direction of the Project Site and account for the visual environment experienced in these frames. Nonetheless, the broader context and district's scenic qualities have been considered, including the key views and the scenic qualities described in the reference material.

As acknowledged in the VIA, one of the limitations of such assessments is that individual sentiment towards a development largely shapes the perception of 'visual impact'. Even though consultation and project working groups comprising various members have been involved and informed the process, it is impossible to accurately gain this level of detail from all members of the community. Nonetheless, in response to submissions and as a result of design progression, modifications (including a reduction to the total volume of the maximum planning envelope) have been submitted with this Submissions Report.

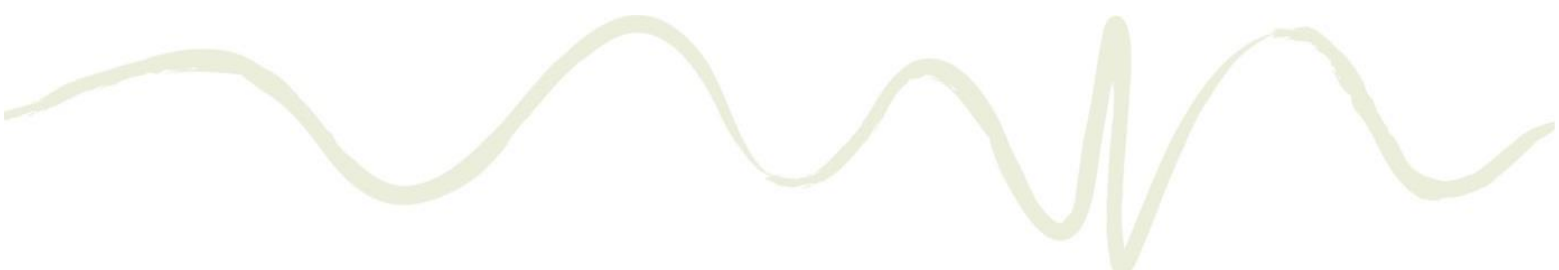
The VIA was based on a sound methodology, informed by relevant reference material, and is considered to be of an appropriate standard and representation to assess the Concept Proposal.

The Consultants assess the impact of the proposal from 10 key VSR's (Visually Sensitive Receivers) they have identified. All the accompanying plates (with one exception) indicate a massive change to the landscape in some instances, particularly views from Kingscliff Hill where the consultants indicate there will be a loss of landmark views to Mt Warning. The accompanying plates all show the impact of the massive scale, height and bulk of the structure.

Refer to previous responses regarding the impact and extent/scale of the maximum planning envelope.

Whilst impacts have been identified, this is based on assessment of the maximum planning envelope which does not account for actual building form, mass or bulk, nor does it take account of the proposed diminishing density associated with the increasing height of the hospital. The maximum planning envelope likely exceeds a worst case scenario as it does not account for these aforementioned aspects. The visual assessment indicates that all assessed VSRs maintain view frame qualities in the medium rating range, including a reasonable amenity standard and appreciation of distant views and natural features where such views are currently experienced. Measures to minimise and/or reduce the potential impact would be explored and developed as part of the design response. The visual impact of the Project, based on schematic design, would be further assessed as part of this in Stage 2, including measures to assist in reducing or mitigating visual impact. The revised plans submitted as part of this Submissions Report already incorporate some changes to reduce visual impact and this will be further explored and defined in the EIS for the Stage 2 SSDA.

In the body of the main EIS Report the consultants themselves conclude "... the main hospital building to be developed and articulated within the planning envelope, would generally be an obvious modification within the local visual environment when viewed from various viewpoints in the surrounding locality." I concur.



The assessment of the Concept Proposal states that an obvious modification would occur, however all view frames would maintain a reasonable visual amenity standard and medium visual quality ratings. 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 Mount Warning based on the worst-case consideration of the maximum planning envelope that does not account for the final form, mass or height of the building.

As detailed in the VIA undertaken, and in the Built Form and Urban Design Report, the Concept Proposal attempts to minimise impacts on the visual landscape of the Cudgen district and local receivers by reducing height, providing increasing articulation and reducing density in the upper zones of the envelope (further demonstrated in the revised plans attached), and presenting generous setbacks. The draft SEPP and resulting rezoning to SP2 Infrastructure would enable the project to comply with the primary planning controls relevant to the site. Whilst an obvious modification to the Project Site might occur and be visible from surrounding viewpoints to varying degrees, 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.

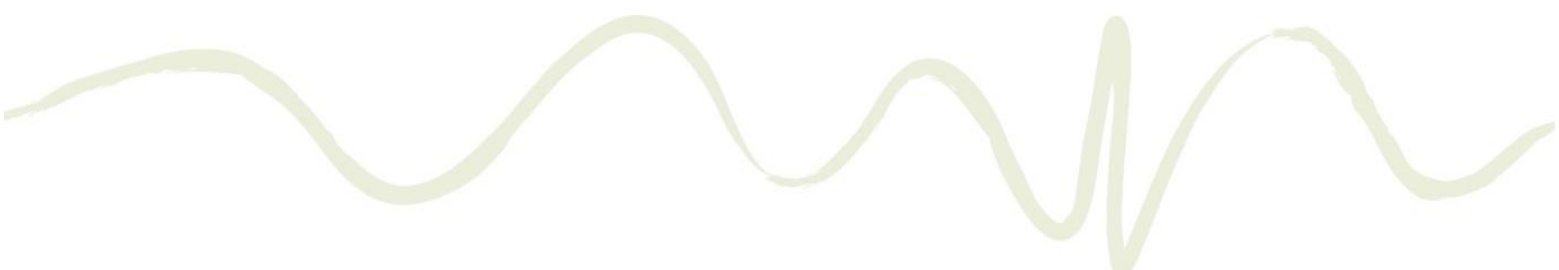
Various measures would be explored and developed as part of the building design and Stage 2 SSDA to help minimise the visual impact. Further visual assessment would occur as part of the SSDA, based on the actual built form proposed.

The impacts of the Primary Building, Support Building and current surface car parking at ground level i.e. from the road, on immediately adjacent farmlands and residential buildings is not considered. The Built Form and Urban Design Report references “Future low-rise development along Cudgen Road responding in a scale sensitive manner to the local built environment scale along Cudgen Road...”. There are no three storey structures of this length currently along Cudgen Road (Support Building) and the impact of a 63 m high Primary Building on the existing rural landscape of Cudgen Road will be enormous.

Ten key view frames from various locations, distances and elevations (as documented in the EIS and VIA) were considered, along with the overall context and scenic quality of the locality and broader district. Some of the view frames assessed and supporting montages prepared by STH Bates Smart Architects are taken from adjacent proximal locations and represent views from Cudgen Road/ Turnock Street and nearby land uses such as dwellings and nearby farmland. The view frames assessed are considered to be reasonably representative of various views from both the public and private realm.

The VIA assesses the overall Concept Proposal, inclusive of the hospital and support building maximum planning envelopes. As above, the impact of the maximum planning envelope, including its maximum height, has been assessed. The maximum planning envelopes do not represent actual built form or mass, which would be subject to design and assessment at Stage 2. The VIA has had adequate regard for the potential impact based on the limitation of assessing the worst-case scenario of the Concept Proposal and planning envelope extents, prior to detailed design and development of the form, massing and articulation.

Rezoning part of the Project Site to ‘SP2 Infrastructure’ and removing building height controls to be consistent with other hospital sites is proposed via a site-specific SEPP prepared by DPE. As detailed above, and in the Built Form and Urban Design Report accompanying 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 providing setbacks. However, without detailed design there is a limitation in that the overall/maximum extent of the Concept Proposal is assessed and this would not be representative of the final outcome that would be notably less in mass compared to the maximum extents of the planning envelopes. The draft 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 letter of 22 August 2018 from Health Infrastructure to DPE also references “Strategically located on-grade car parking that can be converted to multi-deck parking in the future and provide sites for additional buildings”. No assessment of this potential multi-deck parking and additional buildings is provided.

The current SSDA is for a Concept Proposal and Stage 1 Early and Enabling Works of the Tweed Valley Hospital, including the main hospital and a support building envelopes. Potential multi-deck parking and additional buildings, whilst possible future longer-term elements are not proposed, and do not form part of the current application.

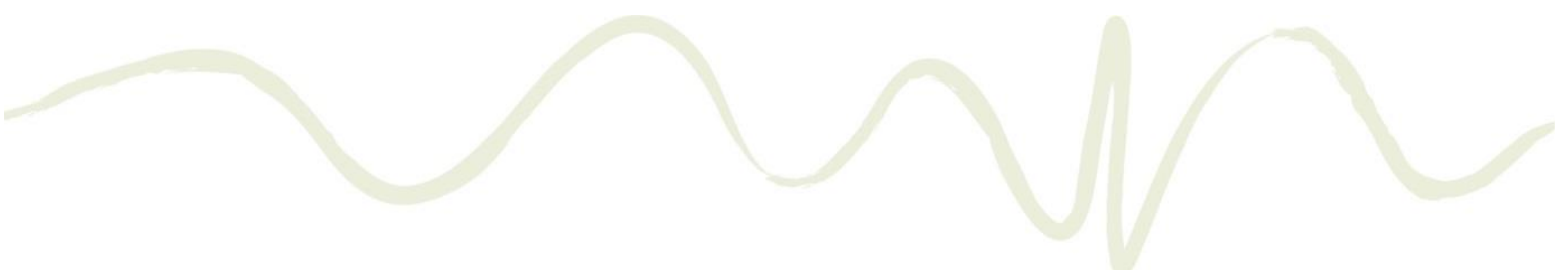
The plates included in the assessment are of concern, and should be distributed to the community, in particular residents on Kingscliff Hill.

The plates in the VIA are copies of the montages prepared by the project architects and the full versions are attached to the EIS and VIA as appendices. These are based on the Concept Proposal, providing an outline of the proposed maximum planning envelopes. An overview of the methodology in preparing these is provided in the VIA and involves a systematic and detailed process to achieve a reasonably accurate representation of the maximum planning envelope when viewed from various points. The 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. The images/montages prepared are acceptable for the purposes of considering a concept proposal, with further assessment to occur at Stage 2. The full EIS, inclusive of the accompanying assessments and supporting documents, have been publicly exhibited by DPE.

3.6 SEAR 5 – Staging

3.6.1 Cost

The full cost of developing the hospital, and required supporting infrastructure such as transport upgrades, is questioned.



On 13 June 2017, the NSW Government announced \$534 million for a new state-of-the-art hospital on a greenfield site (referred to as the Tweed Valley Hospital), including an expanded emergency department, inpatient care and enhanced surgical and outpatient services. New services, including interventional cardiology and radiotherapy, will also be provided in response to clinical service planning priorities.

The 2018/19 State Budget confirmed a \$582 million investment in health for the Tweed and Byron LGAs, which will deliver the Tweed Valley Hospital as well as interim upgrades at the existing TTH to help meet community needs until services transfer to the new hospital.

Clinical services planning as well as concept development is ongoing, with the final extent of development yet to be determined. Planning for delivery of the hospital considers required upgrades to essential infrastructure, including roads and transport to support the operation of the hospital.

Minimal roadworks will be done by the proponent, requiring further upgrades to be completed by Tweed Shire Council. Application for a federal grant to fund the alterations to Tweed Coast Road has been rejected leaving the project the responsibility of Tweed Shire Council using ratepayer funding. Tweed Coast Road is not capable of accommodating the increased traffic of over 10,000 vehicles per day.

The Traffic Impact Assessment follows the appropriate methodology for undertaking a Traffic Impact Assessment (i.e. the RMS Guide to Traffic Generating Developments) and addresses the SEARs for Transport and Accessibility. As part of this process, the operations of the surrounding road network were assessed with background and design traffic volumes. This assessment identified all intersections (with the exception of the Tweed Coast Road/ Cudgen Road intersection) operate within acceptable performance thresholds (in terms of queuing, delays and degree of saturation).

Mitigation measures/ capacity improvements have been proposed at the Tweed Coast Road/ Cudgen Road intersection.

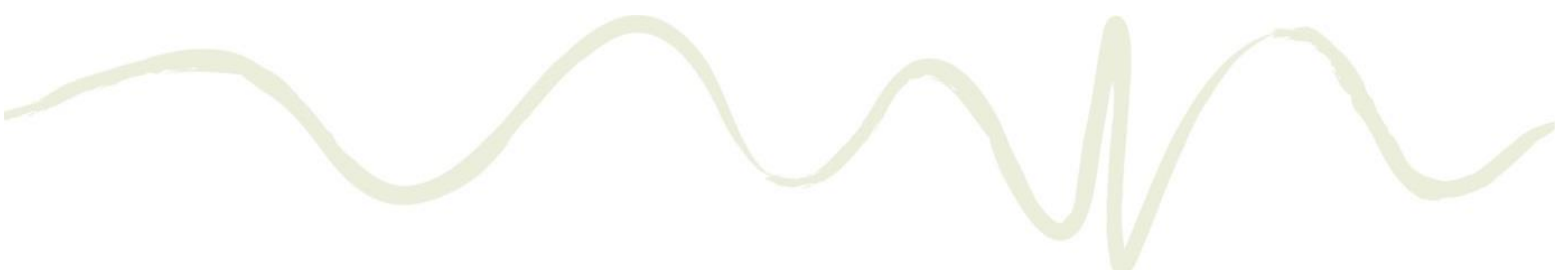
The Tweed Coast Road four-lane upgrade and upgrade works to the Tweed Coast Road/ Cudgen Road intersection is identified within the Tweed Road Development Strategy 2017 and has a funding mechanism in place via the Section 7.11 Plan (formerly Section 94) No. 4 – Tweed Road Contribution Plan.

Based on the yield nominated within the Concept Proposal the traffic impact assessment estimated daily traffic generation as being in the order of 5,000 trips (not 10,000). When considering traffic distributions, the volumes at any given location on Tweed Coast Road are less than the estimated total.

3.7 SEAR 6 - Agricultural Impact

3.7.1 The Loss of State Significant Farmland (SSF)

Development of the site will result in the loss of limited drought free farmland. The ongoing loss of farmland is not sustainable, and development of the site will fragment the Cudgen Plateau SSF area.



The impact of the development on SSF, and in particular limiting fragmentation of farmland, was a key consideration during the site selection process noting that four parcels of SSF were offered up for sale in the EOI process.

Development of the Project Site would not fragment the Cudgen Plateau and would limit flow-on impacts to other SSF, as follows (refer Section 5.6 of the EIS):

- The site sits on the far north-eastern tip of the agricultural area – it is on the urban side of Cudgen Road, opposite Kingscliff TAFE and between existing residential areas of Kingscliff and Cudgen, with future residential developments planned to the north.
- The large site size allows for future hospital expansion and health and education developments without encroaching on surrounding rural areas as well as the provision of appropriate buffers and strategies to minimise and manage potential land use conflict.
- Strengthening partnerships between Health and TAFE provides further opportunity to ensure that all health an education and supporting developments can be accommodated across these two large and co-located sites in the future.
- As outlined in the Agricultural Impact Assessment, the Project Site affects the fringe of such mapped farmland and its location will not fragment the SSF of the Cudgen Plateau and would limit flow-on/ interface impacts to other farmland.
- The south-western tip of the Project Site is adjacent to agricultural land however this is not dissimilar to current circumstances in the locality where residential and education facilities (including Kingscliff TAFE) interface with adjacent farmland and coexist. Intensive agriculture clusters, being the primary area of the Cudgen Plateau (west of Tweed Coast Road), would be adequately protected as the development is not immediately proximal to this concentrated SSF farmland area of the Cudgen Plateau.
- The Project is for public infrastructure and not residential or rural residential expansion and would not set a precedent for such development.

Potential rural land use conflicts have been assessed. Through an appropriate design response and interface management strategy, including potential land use conflict minimisation and management, the development of a health facility on the Project Site would be able to effectively coexist with surrounding land uses.

DPC, with the support of the Tweed Valley Hospital Cross Agency Planning Committee, including Health Infrastructure, is currently pursuing a collaborative opportunity with relevant agencies, outside of the Project, to support the agricultural industry in the region. This would include improved utilisation of agricultural land, including that which has not been farmed for some time. If successful, this initiative could more than offset the reduction of arable land and growing crops at any one time on the Project Site. Engagement with DPI Agriculture regarding incentives/ strategies as well as NSW TAFE and Universities will form part of the development of that opportunity.

This initiative will target a broad range of objectives. Examples include:

- Partnerships with TAFE and other education providers to research and improve productivity.
- Opportunities to get under-utilised land back into production.



3.7.2 Land Use Conflict Risk Assessment (LUCRA)

The development of a hospital in this location would increase the potential for rural land use conflicts. These impacts could include conflict between slow-moving farm vehicles and ambulances or other vehicles travelling to the hospital.

While a default buffer area of 300 m width is recommended between State and Regionally Significant Farmland and residential development, the guideline *Living and Working in Rural Areas – A handbook for managing land use conflict issues on the New South Wales North Coast DPI (2007)* does not stipulate a setback from commercial/industrial developments to State and Regionally Significant Farmland.

The proposed development will house staff and patients within airconditioned buildings, serviced with reticulated water supply with minimal outdoor exposure when compared to an equivalent residential setting.

Measures to reduce any potential traffic impacts are addressed in the Traffic Impact Assessment and subsequent Traffic Management Plan for both construction and operations.

The Tweed Valley Hospital entrance and pedestrian points have been located opposite Kingscliff TAFE. Other appropriate controls relating to turning lanes and lane dividers are proposed to adequately address traffic concerns.

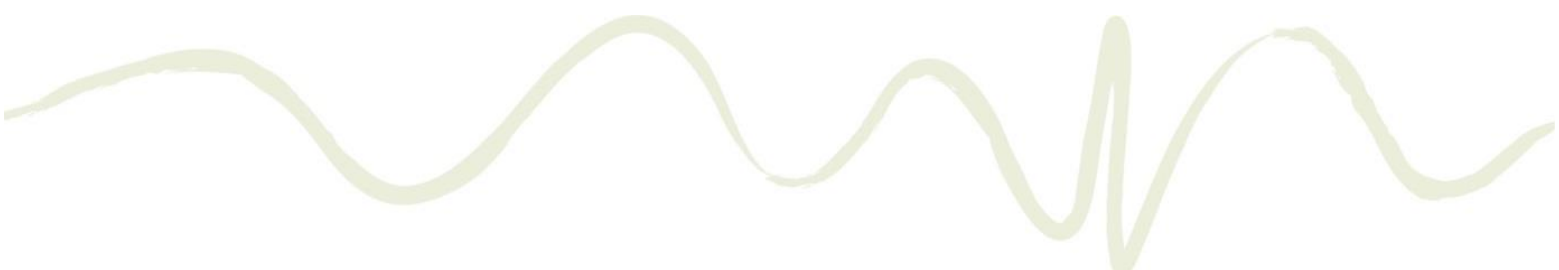
The EIS notes a risk of spray and dust associated with surrounding agricultural activity. Noting that the hospital accommodates sick/unwell people it is suggested that an increased buffer is required to separate the hospital from farmland, in consultation with the farming community. It is questioned whether the hospital should be classified as a commercial, noted that minimum standards should be established, and questioned whether a hospital is compatible with SSF.

The proposed development will house staff and patients within airconditioned buildings, serviced with reticulated water supply with minimal outdoor exposure when compared to an equivalent residential setting.

The proposed vegetated buffers have been developed following an assessment of the specific risk and consequences of conflicts between the proposed Tweed Valley Hospital commercial development and adjoining agricultural uses.

Conflict between residential development and agricultural land uses is likely to occur where residential land uses directly abut, or are sufficiently close to, farmland such that they are likely to be affected by agricultural activities. Conflict between the proposed commercial development (Tweed Valley Hospital) and existing agricultural activities could occur but are less likely given the reduced likelihood of exposure to workers or patients compared to residential receptors due to the probability of occurrence.

The subject development has direct access to Cudgen Road. Based on the advice of Mathew Prichard there are potential conflicts between heavy and slow vehicles accessing Matt and Mates Farm and vehicles entering the Tweed Valley Hospital opposite.



Measures to reduce any potential traffic impacts are addressed in the Traffic Impact Assessment and would be further developed and implemented as part of the subsequent Traffic Management Plan for both construction and operations.

Based on the proximity of the existing vegetable cropping to the south of the proposed Tweed Valley Hospital a series of vegetated buffers will be designed to provide an effective safeguard to spray drift.

A vegetated buffer based on the following criteria is to be installed on the Project Site along the southern boundary:

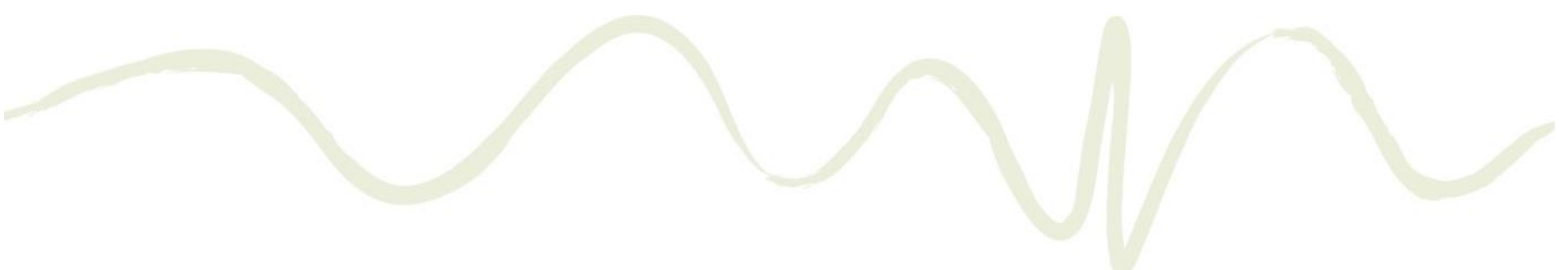
- Contain random plantings of a variety of tree and shrub species of differing growth habits, at spacings of four to five metres for a minimum width of 30 m.
- Include species with long, thin and rough foliage which facilitates the more efficient capture of spray droplets;
- Provide a permeable barrier which allows air to pass through the buffer. A porosity of 0.5 is acceptable (approximately 50 percent of the screen should be air space);
- Foliage is from the base to the crown;
- Include species which are fast growing and hardy; and
- Have a mature tree height at least three metres;

Supplementary plantings are to be installed between the existing row of mixed trees and shrubs on the western and south-western boundary of the Project Site based on the following criteria to form an improved vegetative screen:

- Contain random plantings of a variety of tree and shrub species of differing growth habits, at spacings of two to three metres for a minimum width of 10 m.
- Include species with long, thin and rough foliage which facilitates the more efficient capture of spray droplets;
- Provide a permeable barrier which allows air to pass through the buffer. A porosity of 0.5 is acceptable (approximately 50 percent of the screen should be air space);
- Foliage is from the base to the crown;
- Include species which are fast growing and hardy; and
- Have a mature tree height at least three metres.

Note: *The Pesticides Act 1999* regulates the use of pesticides in NSW. Management practices must either eliminate spray drift or at least minimise it to a level where it will not cause adverse health impacts.

- Where possible, open spaces for compromised patients should not be located along the southern frontage. By locating courtyards and balconies on the opposite side of the buildings to the southern farmland, the buildings themselves will provide physical screening of farm activities.
- The Hospital building will be air-conditioned. The air intake for air-conditioning should not be located on the southern side of the building/s.
- Roof water shall not be utilised for potable use.
- Any roof water utilised for secondary uses should be fitted with a first flush diverter and adequately filtered in accordance with the relevant Australian Standards for non-potable secondary use/s.



It is noted that the land encroaches on buffer zones for surrounding coastal wetlands and agricultural use, and that the site layout design does not follow recommendations for avoidance of public use spaces adjacent to farmland (due to threat of overspray etc). The EIS does not consider the future requirement for additional land for auxiliary services.

In assessing the potential risk of land use conflict associated with the proposed Tweed Valley Hospital and existing adjoining agricultural land uses, three key documents are relevant, namely: Living and Working in Rural Areas – A handbook for managing land use conflict issues on the New South Wales North Coast, produced by NSW Department of Primary Industries 2007; Tweed Sustainable Agriculture Strategy, Tweed Shire Council June 2006; and the Draft Rural Land Strategy, Tweed Shire Council.

LUCRA's were initially conceived in the Living and Working in Rural Areas Handbook (Department of Primary Industries et.al 2007) by the Centre for Coastal Agricultural Landscapes in partnership with the Northern Rivers Catchment Management Authority as a tool to better manage potential land use conflicts between residential development and rural activities and environmental attributes/assets on the NSW North Coast.

Heath Infrastructure has chosen to adopt the LUCRA tool to better identify potential land use conflicts risks associated with the proposed development and existing agricultural land uses and, where necessary, propose mitigation options to address any unacceptable risks.

The proposed vegetated buffers have been developed following an assessment of the specific risk and consequences of conflicts between the proposed Tweed Valley Hospital development and adjoining agricultural uses. The proposed location of the service road within the campus masterplan allows the 10 m western landscape buffer to be expanded if future changes to adjacent agricultural land uses occur and the car park areas, on the campus, are redeveloped in the future. The potential expansion of the buffer is shown in a drawing attached to **Appendix K**.

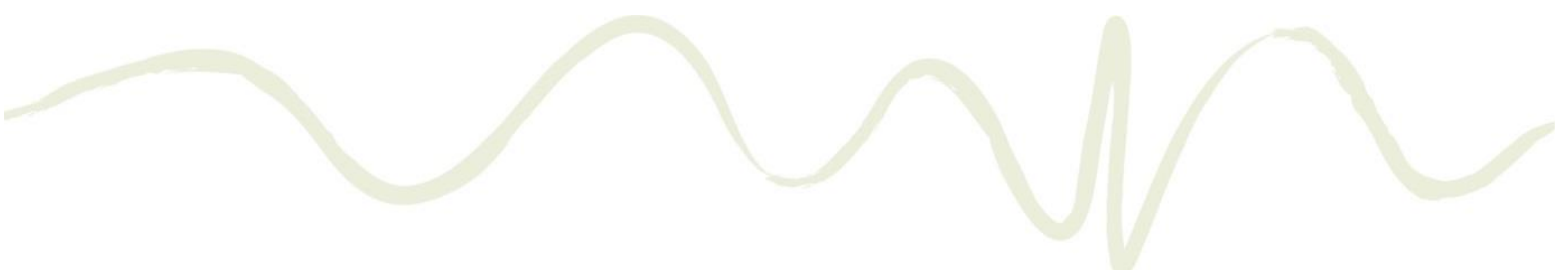
The same buffer zones that apply to residential development (300 m according to the Living and Working in Rural Areas Handbook) should be applied to the hospital development. The LUCRA should be revisited to be more specific to a hospital in proximity to SSF.

The LUCRA has considered the risks and consequence of the proposed development in the context of the existing surrounding land uses.

It is our view that the proposed development is more compatible with existing agricultural uses than residential development would be.

The mix of recommended mitigation measures will afford appropriate controls to minimise any potential conflicts. Proposed vegetated buffers are deemed to be acceptable given the:

- Nature of the existing agricultural land use;
- Nature of the proposed land use (proposed air-conditioned Hospital with reticulated town water);
- Limited exposure and resultant risk to hospital staff, patients and visitors when compared to full residential occupation.



The use of a vegetative buffer is questioned as the most appropriate mitigation measure to manage the risk of spray drift, odour from sprays, and red dirt dust from agricultural activities. It is noted that the vegetated buffer would require a high level of maintenance to ensure it is effective. It is also questioned whether a hospital should be assessed in the same way as Residential Development, due to the high level of sick and immune compromised people on-site.

Measures to reduce risk are based on the likelihood of exposure and resultant consequence. The Precautionary Principle has been applied to the LUCRA. Given a combination of distance attenuation (30 m wide vegetated buffer), a fully air-conditioned hospital with a reticulated water system, and limited use of outdoor facilities coupled with the intermittent use of fertilisers and chemicals on vegetable crops on neighbouring farmland the resultant risk to hospital staff, patients and visitors is deemed to be acceptable.

Additional mitigation measures include:

- Where possible, open spaces for compromised patients should not be located along the southern frontage. By locating courtyards and balconies on the opposite side of the buildings to the southern farmland, the buildings themselves will provide physical screening of farm activities.
- The air intake for air-conditioning should not be located on the southern side of the building/s.
- Roof water shall not be utilised for potable use
- Any roof water utilised for secondary uses should be fitted with a first flush diverter and adequately filtered in accordance with the relevant Australian Standards for non-potable secondary use/s.

The proposed vegetated buffers will be subject to detailed design as part of the Landscape Plan. Following establishment, the vegetated buffer will be included in the overall Landscape Maintenance and Management Plan for designated Hospital staff or contractors.

The location of the proposed vegetated buffer is being considered in the planning proposal process to reflect any relevant competing interest includes bushfire, traffic, sightlines and dust accumulation.

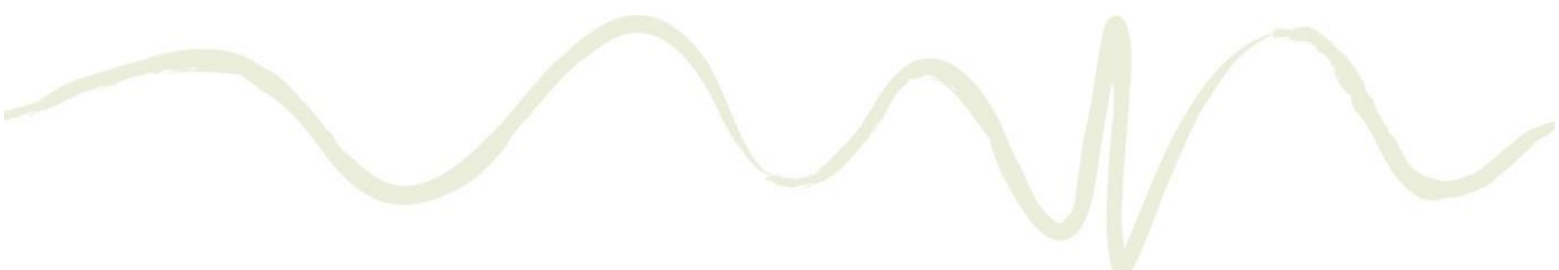
The risk to staff, patients, visitors and alike from exposure to dust from contact with or being in the vicinity of vegetated buffers is far outweighed by the benefit of installing the vegetated buffer as a precautionary measure to filter particulate matter (dust) and spray drift.

The proposed purpose of the vegetated buffer is to filter particulate matter (dust) and spray drift. Air will flow through the buffer. It is true that the vegetated buffer will alter the microclimate in a positive way by absorbing nutrients, producing oxygen and provide a cooler climate. The vegetated buffer will be incorporated into the overall Landscape Plan for the Hospital adding to the green space.

The vegetated buffer as part of the Landscape plan will provide a green entrance to the hospital site.

The hospital will create a land use conflict that could affect farmers' right to farm, due to future complaints from staff and patients.

There exist extensive local examples in the region where agricultural activity occurs in close and in many cases direct proximity with established residential areas including local schools and other civic functions, for example; the south and west boundaries surrounding Cudgen Town and TAFE.



Notwithstanding this Health Infrastructure have appointed an environmental specialist to assess and provide recommendations to address identified Land Use Conflicts, refer Appendix J of the EIS (Land Use Conflict Assessment Report) and **Appendix K** of this Submissions Report. These recommendations have been considered and will be implemented where deemed appropriate. Further design development will continue to have regard for the recommendations of the report and where necessary seek further advise to ensure the final hospital design is safe for its users.

The *Pesticides Act 1999* regulates the use of pesticides in NSW. Management practices must either eliminate spray drift or at least minimise it to a level where it will not cause adverse health impacts. Compliance with this by surrounding farmers would negate any legitimate cause for complaint and impact on the ability and right of farmers to farm.

The Concept Design for the hospital does not follow the LUCRA recommendation that open spaces for patients should not be located along the Southern Frontage of the hospital site. The concept proposal appears to designate the south hospital landscape zone with open spaces, lawns, gardens, plazas and feature entries.

There exist extensive local examples in the region where agricultural activity occurs in close and in many cases direct proximity with established residential areas including local schools and other civic functions, for example; the south and west boundaries surrounding Cudgen Town and TAFE. Notwithstanding this Health Infrastructure has appointed an environmental specialist to assess and provide recommendations to address identified Land Use Conflicts, refer Appendix J of the EIS (Land Use Conflict Assessment Report) and **Appendix K** of this Submissions Report. These recommendations have been considered and will be implemented where deemed appropriate. Further design development will continue to have regard for the recommendations of the report and where necessary seek further advise to ensure the final hospital design is safe for its users.

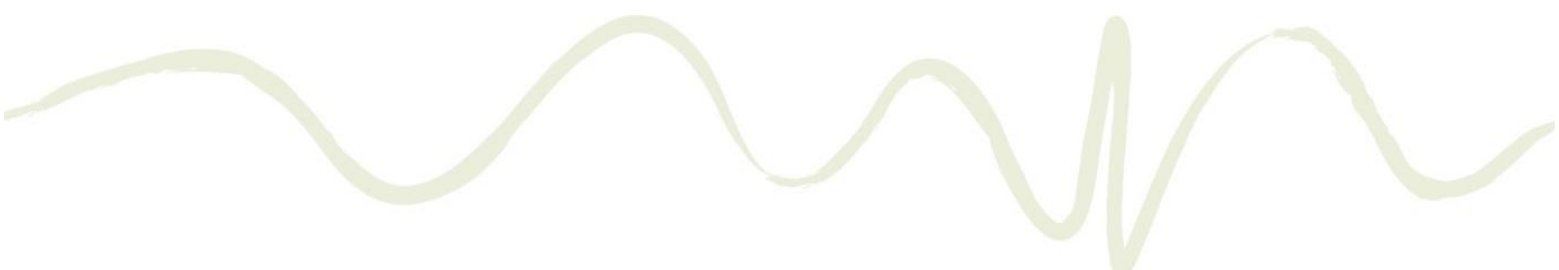
In the proposed concept design, the hospital maximum planning envelope (based on the revised plans at **Appendix B**) has been set back 75 m from the south boundary with Cudgen Road and 43 m ranging to 292 m from the west boundary, of which both boundary setbacks exceed the planning guideline minimum setback widths where effective buffers have been implemented. The main public open spaces will occur adjacent the support building, also to the north and eastern sides of the hospital. Patient outdoor open space is typically limited to enclosed courtyards or will occur beyond zones at risk of chemical spray drift. The design team will continue to work closely with the nominated expert advisor, ensuring risks to people are adequately mitigated as the design develops.

3.7.3 Cumulative Impacts

The LUCRA does not consider the potential impact of further SSF being lost due to the need for expansion and ancillary development on SSF in future.

The issue of potentially more SSF being required for further medical services or a medical precinct was not part of the scope of works for the LUCRA. These matters have been addressed elsewhere in relevant sections of this Submission Report.

As demonstrated by the master plan and Built Form and Urban Design Report submitted with the EIS, the large site size allows for future hospital expansion and health and education developments without



encroaching on surrounding rural areas as well as the provision of appropriate buffers and strategies to minimise and manage potential land use conflict.

As the project is for a public purpose/ infrastructure and given that the site was deemed the most suitable and the feasible option on the basis of an extensive review of potential sites, arguments that suggest the proposed hospital would set a precedent and could allow further urban development to occur on SSF are unfounded. The draft SEPP and rezoning process by DPE would also ensure that rezoning of the Project Site to SP2 Infrastructure does not have any unintended consequences beyond the Project Site. This zoning relates to essential infrastructure; in this case a critically needed hospital for the Tweed-Byron region. On this basis there would be no further incremental or cumulative impact to SSF attributed.

3.8 SEAR 7 - Transport and Accessibility

3.8.1 Traffic Congestion/ Road Network

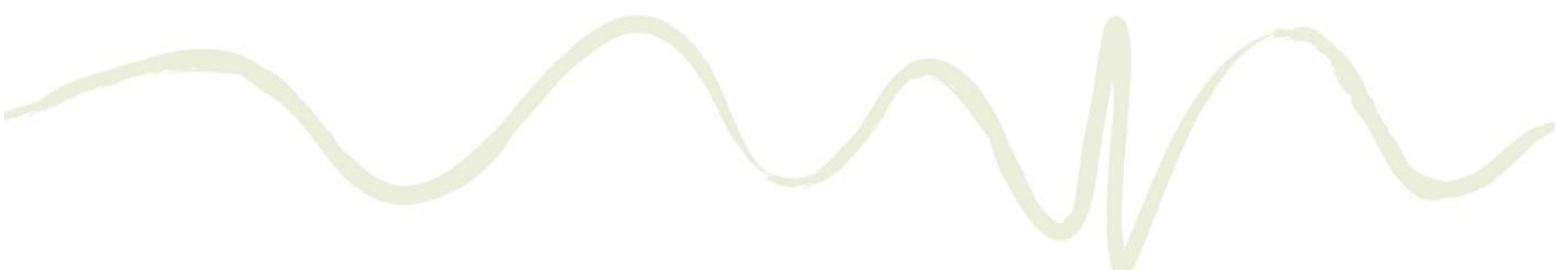
The development will result in increased traffic congestion, parking pressure and twenty-four hour a day ambulance movement. This will impact amenity in Kingscliff.

The draft Kingscliff Locality Plan (KLP) outlines that the Tweed Coast has seen exponential growth. The locality of Kingscliff in particular has been a major contributor to this growth, elevating its settlement status from a coastal village (<3000 residents), to a coastal town (3000-20,000 residents). The KLP states that when acknowledging Kingscliff's broader service catchment, existing undeveloped urban release areas, along with continuing infill development, Kingscliff's population could surpass the population threshold usually associated with a small coastal city (>20,000 residents, Coastal Design Guidelines for NSW). The KLP outlines that the existing role of the Kingscliff locality as the subregional centre servicing Tweeds' network of coastal villages (Fingal Head, Cudgen, Casuarina, Cabarita, Hastings Point, Pottsville and future Kings Forest) is anticipated to be reaffirmed. The KLP shows notable areas for potential future urban release and projected population growth for the area. One of the key KLP vision statements for the area includes:

- Expand employment generating land uses by providing land use opportunity for larger employment generating developments such as a business park, health and/or university campus, commercial and retail uses, as well as a range of student, tourist and residential accommodation types to build upon the existing industry pillars of tourism, agriculture, health and local small business.

This statement from the KLP clearly indicates the important and evolving role of Kingscliff as a subregional centre. Such attributes and future growth provide strong support for the selection of the Project Site being within this immediate locality. This allows the Tweed Valley Hospital to be established in the context of an existing and emerging urban area, supported by infrastructure and a growing locality that will deliver more housing, jobs and services.

A Traffic Impact Assessment (TIA) has been prepared, with the overall conclusion from these investigations being that traffic, parking, access and circulation arrangements for the Project would be satisfactory and there are no traffic or parking impediments to the Project. A number of site access points and required upgrades to surrounding road intersections have been identified and can be undertaken at applicable stages to adequately service and cater for the Project. Transport enabling



works including the four Project Site access intersections will be funded by Health Infrastructure. The intersection upgrade of Tweed Coast Road/Cudgen Road recommended by the TIA would be undertaken in Stage 2. Health Infrastructure will work with Tweed Shire Council and RMS on the delivery of external traffic infrastructure commensurate with future planning for the surrounding road network.

In relation to potential impact of ambulance movements, reducing the unnecessary use of lights and sirens improves road safety for paramedics, patients and the community. NSW Ambulance only use lights and sirens during transport to hospital if the patient's condition is deemed as life-threatening or rapidly deteriorating.

Ref: <http://www.ambulance.nsw.gov.au/Calling-an-Ambulance/Frequently-Asked-Questions.html>

The existing road network is not sufficient to accommodate the increased traffic associated with the development.

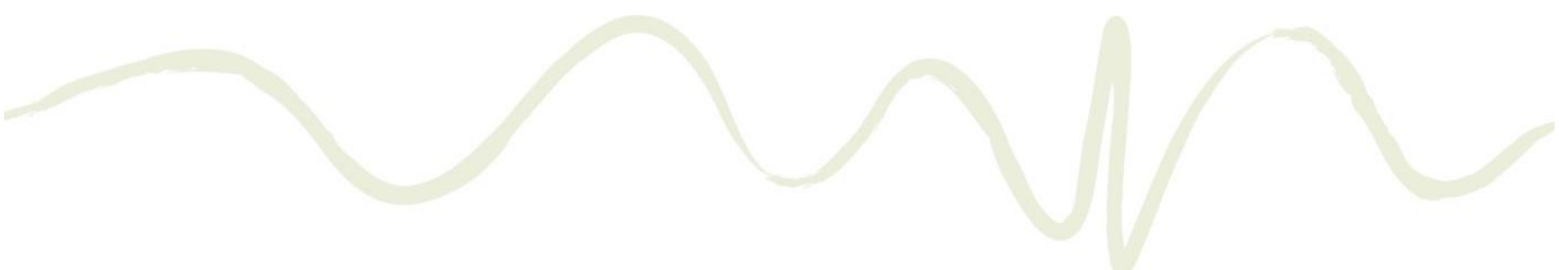
The overall conclusion from the investigations carried out by Health Infrastructure's advisors and presented in the Traffic Impact Assessment is that traffic, parking, access and circulation arrangements for the project would be satisfactory and there are no traffic or parking impediments to the project. It is noted that the response received from Roads and Maritime Services (RMS) supports the findings of the Traffic Impact Assessment completed by Health Infrastructure's advisors. Specifically, RMS states that in their technical assessment of the EIS (specifically Section 5.7 SEAR 7 – Transport and Accessibility), that the baseline for impact assessment is reasonable and the predictions of impact are robust and conservative with suitable sensitivity testing.

The Traffic Impact Assessment prepared by Bitzios Consulting considered the full range of transport impacts, and possible mitigation to ensure the surrounding road networks are able to accommodate the traffic generated by the new hospital. This included assessment of Year 2023 as the conservative year of opening and Year 2033 as the 10-year design horizon. The TIA also proposes certain road upgrades to ensure impacts associated with the hospital are mitigated. It is noted that in their assessment, RMS considers that the proposal includes all reasonable feasible mitigation options.

The traffic impact assessment considered:

- Existing site access, traffic and road conditions.
- Future planning and transport network considerations.
- Existing traffic flows, referred to as background traffic.
- Background traffic modelling.
- Detailed consideration of surrounding roads and intersections including:
 - Pacific Highway/ Tweed Coast Road Interchange.
 - Tweed Coast Road/ Cudgen Road signalised intersection.
 - Cudgen Road/ Turnock Street roundabout.
 - Turnock Street/ Elrond Drive roundabout.
 - Turnock Street/ Pearl Street roundabout.

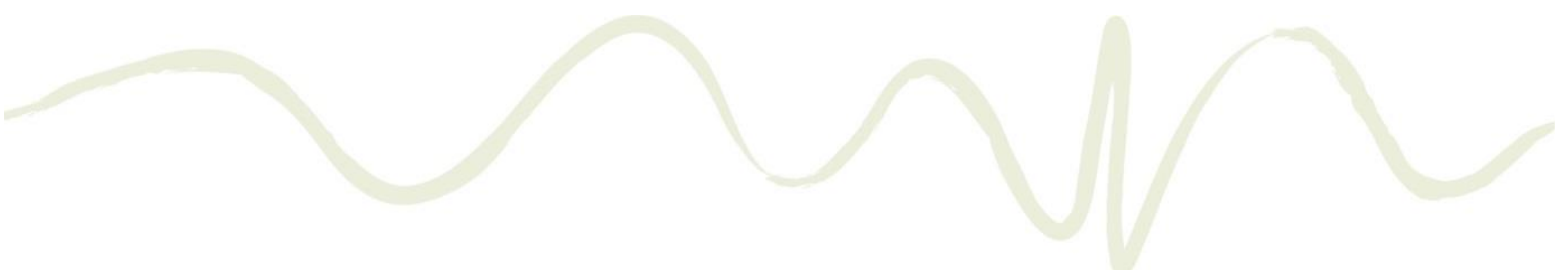
Consideration was also given to on-site vehicle movements, bicycle and pedestrian access and on-site movements, the use of public transport including upgrades to the network and new bus stops and detailed consideration of parking demand and supply.



The following key findings were made, demonstrating that the hospital will not have a negative impact on traffic and roads in the area:

- The Tweed Valley Hospital is estimated to generate a maximum of 603 peak hour trips and in the order of 5,000 trips per day.
- The proposed accesses have been designed to cater for design traffic volumes (including ensuring access intersections operate within acceptable performance limits).
- The Tweed Valley Hospital is not expected to generate any internal queues that will impact the external road network.
- The external road network and intersections are expected to cater for the future background and design traffic scenarios, with the exception of the Tweed Coast Road/ Cudgen Road intersection.
- A number of site access points and required capacity upgrades have been identified to cater for background traffic and design traffic scenarios in Year 2023, including the addition of a turning lane, extension of stand-up lanes, lane discipline and phase changes. Upgrades can be undertaken at applicable stages to adequately service and cater for the Project. Transport enabling works including the four access intersections to the Project Site will be funded by Health Infrastructure.
- The Project proposes two new indented bus bays on Cudgen Road and associated infrastructure, replacing the existing bus stops. There is potential for extension of Surfside Busline Route 601 to improve public transport services to the Project Site and resolve existing issues with the current termination of the service. Tweed Valley Hospital's inclusion within any updates to the service planning and the inclusion of On-Demand services will occur over the coming years in consultation with TfNSW, Surfside and other transport operators.
- Transport enabling works including the four Project Site access intersections will be funded by Health Infrastructure.
- Health Infrastructure has initiated a Transport, Access and Parking (TAP) working group to develop a range of transport strategies and measures that can be implemented throughout the design development, construction and operational phases of the Project. The TAP working group will incorporate a range of stakeholders including Council, transport operators, staff, TAFE and community representatives.
- The TAP working group will be developing a Sustainable Transport Plan for the precinct, which include a Green Travel Plan (GTP). While specific targets for public and active transport are yet to be determined for the Green Travel Plan, it is expected that these would generally align with targets in TfNSW's "Regional NSW Services and Infrastructure Plan". This plan nominates public and active transport mode share targets for 2056, as follows:
 - Public Transport – three percent to five percent;
 - Walking – four percent to eight percent; and
 - Cycling – two percent to five percent.

RMS, in their assessment, conclude that the assessed impact is considered acceptable within the policy context of Roads and Maritime, as the TIA was prepared in accordance with relevant Austroads Guidelines and the RTA Guide to Traffic Generating Developments 2002. The TIA has identified road network upgrades that are required over the ten-year design horizon to 2033, to mitigate the impact of the development.



Traffic generation for the project has been underreported. The TIA does not take into account the ultimate demand of the fully developed proposal (900-beds), along with the cumulative impacts of TAFE expansion, and the regional health precinct. No consideration has been given to the cost of maintaining road surfaces to Tweed Shire Council.

The project proposal submitted as part of the EIS is defined as follows:

- Concept Proposal and Stage 1 Early and Enabling Works.

A second SSDA will be submitted for Stage 2, as follows:

- Stage 2: Hospital Delivery - Main Works and Operation.

The TIA has been prepared with consideration to the proposal (i.e. Concept Proposal) which by definition includes a new Level 5 major referral hospital, with up to 450 beds. The development of a 900-bed hospital is not contemplated in the current assessment and is not what has been applied for. The traffic assessment incorporates Council's background forecasting and traffic network planning out to a 2041 horizon.

Any subsequent stages (e.g. future hospital expansion or other medical services not included in the concept proposal) would be subject to a separate application(s) as required and would be related to works for potential future expansion of the facility. A separate traffic assessment would be required for any subsequent applications and undertaken in consultation with Council and State agencies.

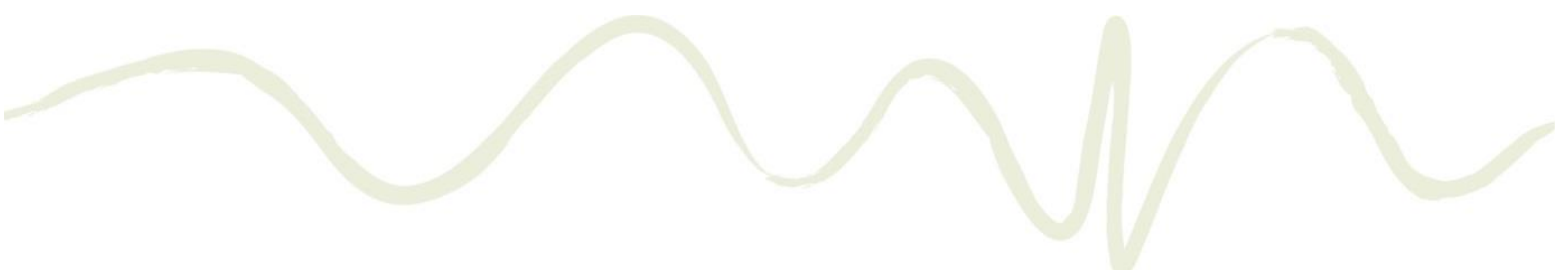
It is noted that Tweed Shire Council is a key stakeholder, with their own processes in place to forecast and budget for ongoing road maintenance.

The TIA assessment is inadequate, as it underestimates the ultimate vehicle numbers for a 900 bed/ 2400 staff hospital, and omits assessment of patient/ visitor movements. Inadequate assessment of current traffic, and that the current road network does not cope with capacity, nor assessment of impact on nearby uses such as TAFE, the swimming pool and High School.

The Traffic Impact Assessment assesses the Project yield included as part of the Concept Proposal and Stage 1 Early and Enabling Works in the EIS. The Concept Proposal is for delivery of a new Level 5 major referral hospital. Any subsequent stages (e.g. future hospital expansion or other medical services not included in the concept proposal) would be subject to a separate application(s) as required. It is noted that neither the master plan, nor the SSD contemplates a 900-bed hospital.

The RMS Guide to Traffic Generating Developments was used to calculate the project's peak hour traffic generation. Traffic generation rates nominated within the Guide to Traffic Generating Developments are based on historical traffic surveys and data analysis and utilisation of these rates is industry practice.

As part of determining these rates, traffic surveys were undertaken for operating hospital sites and correlated to known variables (i.e. bed and staff numbers). The traffic generation rates therefore do not omit patient or visitor movements.



The Traffic Impact Assessment follows the appropriate methodology for undertaking a Traffic Impact Assessment (i.e. the RMS Guide to Traffic Generating Developments) and addresses the SEARs for Transport and Accessibility. As part of this process the operations of the surrounding road network were assessed with background and design traffic volumes. This assessment identified all intersections (with the exception of the Tweed Coast Road/ Cudgen Road intersection) operate within acceptable performance thresholds (in terms of queuing, delays and degree of saturation).

Traffic modelling was undertaken in accordance with consideration to RMS and Council's requirements. Liaison with both RMS and Council is currently being undertaken in relation to the delivery of the necessary transport infrastructure to support the Project.

A Transport, Access and Parking Working Group has been established to review car parking demand, supply and operations. The working group will review impacts that the Project may have on the on-street parking supply and on nearby off-street car parks (including the Kingscliff TAFE, Tweed Regional Aquatic Centre Kingscliff and Kingscliff High School car parks).

The development will require improved public transport. This will change the character of Kingscliff from coastal town to urban hub, and will destroy amenity. There are no suitable roads for buses to turn, or wait, without impacting the whole town due to increased public transport.

Public transport was reviewed and assessed as part of the Traffic Impact Assessment.

Cudgen Road and Turnock Street are part of an existing public transport route which includes public bus stops fronting the subject site. The Concept Proposal includes upgrades to existing facilities (i.e. the two existing bus stops on Cudgen Road), improving the safety and efficiency of bus operations on the site frontage.

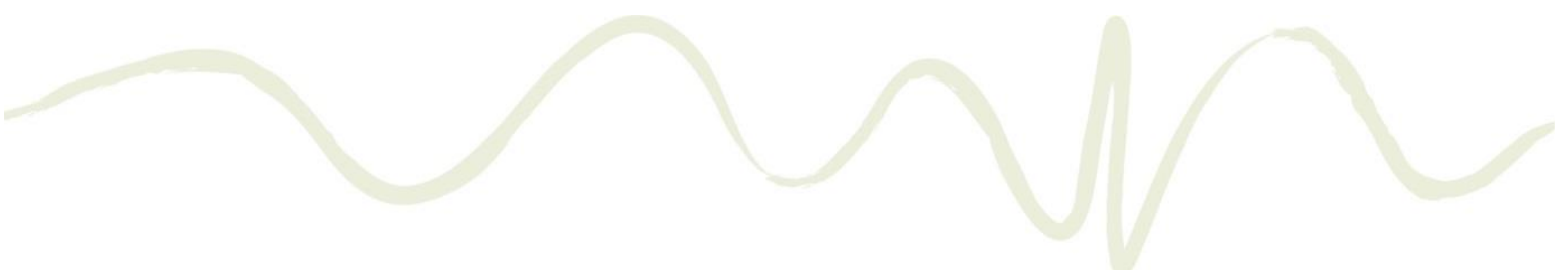
Transport for NSW (TfNSW), in coordination with the bus operator (Surfside), are in the process of a service planning review. It is noted that this review is being conducted as ongoing service improvement investigations across the state (i.e. regardless of the Project). As upgrades are neither committed, nor funded, consultation has been held with TfNSW and Surfside and will be ongoing to ensure appropriate public transport updates and provisions are in place to support the Tweed Valley Hospital.

Improved public transport, including increased frequency and expanded network, is considered a net benefit to all residents of the area resulting from the development of the hospital.

Council has no plans or budget to upgrade roads in the area, only undertake maintenance. The proposal will impact on Council's ability to fund upgrades and maintenance.

Section 3.4.3 of the Traffic Impact Assessment refers to current and proposed roadworks in the short-term (i.e. immediate future). Notwithstanding, future planned upgrades are identified within Council's Tweed Road Development Strategy (TRDS).

The Tweed Coast Road four-lane upgrade and upgrade works to the Tweed Coast Road/ Cudgen Road intersection is identified within the Tweed Road Development Strategy 2017 and has a funding mechanism in place via the Section 7.11 Plan (formerly Section 94) No. 4 – Tweed Road Contribution



Plan. Throughout the planning of these upgrades there has been a strong level of certainty from Council of the Tweed Coast Road four-lane upgrade proceeding. This is re-iterated in the RMS agency response.

Transport enabling works including the four Project Site access intersections will be funded by Health Infrastructure. Health Infrastructure will work with Tweed Shire Council and RMS on the delivery of external traffic infrastructure commensurate with future planning for the surrounding road network.

Council's application for funding to upgrade Tweed Coast Road to four lanes has been refused. Tweed Coast Road is scheduled for completion in 2033, 10 years after the opening of the new hospital.

The Tweed Coast Road four-lane upgrade and upgrade works to the Tweed Coast Road/ Cudgen Road intersection is identified within the Tweed Road Contributions Plan, which has a funding mechanism in place via the Section 7.11 Plan (formerly Section 94) No. 4 – Tweed Road Contribution Plan. In addition, Council may seek funding through other sources including funding grants, developer works or Council's own funding.

Health Infrastructure is working closely with Council and RMS on the delivery and timing of external traffic infrastructure to support the project and to ensure that this is commensurate with Council's future planning for the surrounding road network.

The TIA confirms that the project is not contingent on the upgrade of Tweed Coast Road to four lanes, however Health Infrastructure continues to support Council to deliver road upgrades identified as being in the public interest. An interim upgrade of the Tweed Coast Road/ Cudgen Road intersection, as identified and recommended by the TIA, would be undertaken as part of the project at the applicable stage.

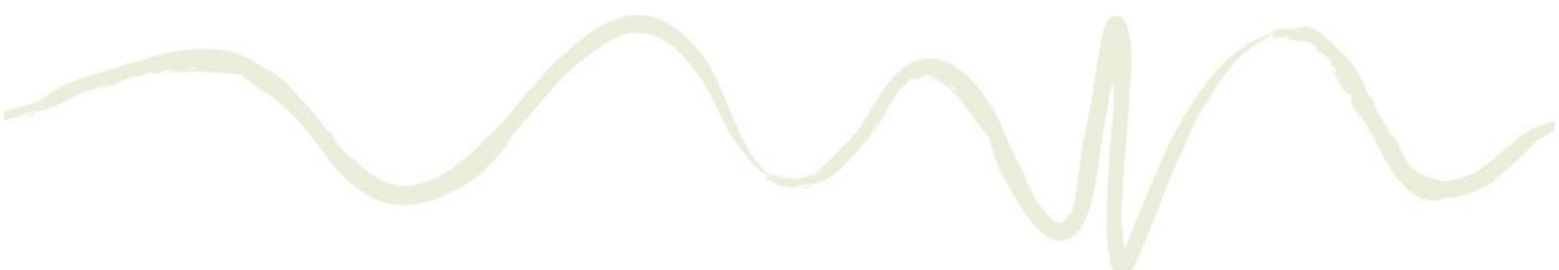
3.8.1.1 TIA Methodology

The traffic assessment does not consider the 4.5t load limit of roads in Kingscliff. The intent of the load limit was to extend the life of local streets. This restriction will not apply to construction traffic. This should be addressed in the TIA.

During the operational phase, large service vehicles movements accessing the site will do so via designated service vehicle routes, as outlined by RMS.

For the construction phase, large vehicle movement volumes, hours of operation and haulage routes will be defined through a detailed Construction Traffic Management Plan (CTMP). This is likely to include dilapidation surveys of designated routes pre and post construction and remediation of any impacts during the construction stage.

The construction contractor is required to have in place all relevant approvals and applications with Tweed Shire Council (e.g. Approval for Temporary or Partial Road Closure Including Road Related Areas). If oversize and/or over mass vehicles and loads are required, approval is required from RMS. Haulage routes have not been confirmed at this stage, however the main access/ haulage routes are



expected to be via Cudgen Road, Tweed Coast Road and the Pacific Highway in consultation with RMS and Council.

The traffic growth rates in the EIS do not take into account the growth of the Kings Forest development as a State Significant Site with an approved new township of 11,000 residents, town centre and education facilities. The TIA does not reflect the ultimate traffic volumes that occur in the region. The TIA should be reviewed, taking into account the ultimate development of Kings Forest, further redevelopment of the TAFE, the ultimate medical precinct and other private residential development in the area.

Traffic growth in the area and in particular along Tweed Coast Road has been assessed in consultation with Council and RMS. This included a review of historical traffic growth trends, traffic surveys (i.e. 2018 tube count volumes) and 2041 volumes from the Tweed Strategic Transport Model (TSTM) under various infrastructure scenarios.

The TSTM includes Council's development projections including population, employment and enrolment forecasts for the Tweed Shire and southern Gold Coast. This includes future projections for adjacent large-scale developments such as Kings Forest and West Kingscliff development areas as well as in-fill developments as advised by Council's Planning Department.

The growth rates utilised within the transport assessment incorporate scenarios both with and without external traffic upgrades (i.e. Tweed Coast Road upgrade, and additional east-west roads associated with West Kingscliff development).

The table tube count on Tweed Coast Road and Cudgen Road along with forward forecasting is questioned.

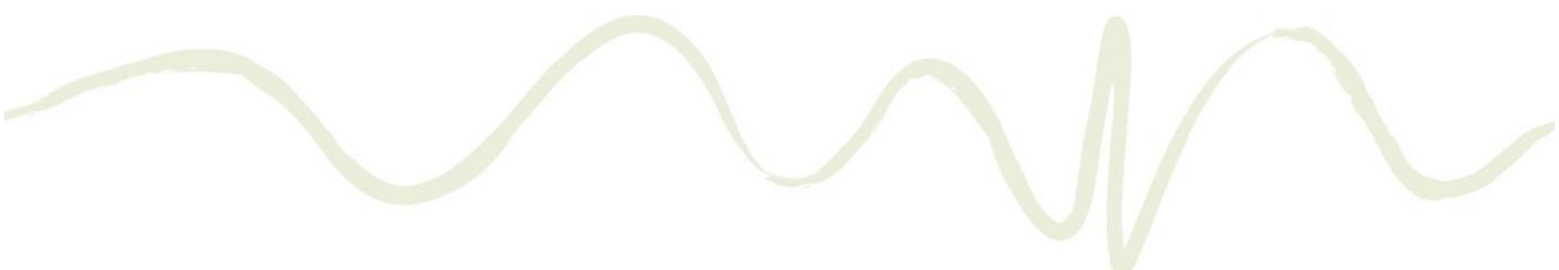
The average number of motor vehicles per dwelling for the Tweed Shire LGA is 1.7 (2016 Census).

A range of factors are required to be assessed in determining the number of trips added to the road network by a development and where trips are added, including:

- Rate of development;
- Internalisation of trips;
- The surrounding road network;
- Land use types and densities; and
- Demographics (population, employment and education).

The Tweed Strategic Transport Model which was used for growth forecasting considers the relevant factors.

As detailed in the TIA, a range of traffic surveys were undertaken to inform the assessment, including turning movement surveys for intersections and tube counts. The RMS has reviewed the TIA and considers it to be appropriate and that it provides a suitable, conservative assessment.



The peak hour modelling of around five second delays at Pearl Street intersection does not reflect the delays experienced in real life. The modelling should be revisited.

The traffic assessment has been undertaken in accordance with the RMS Guide to Traffic Generating Developments and a thorough review of the existing traffic operations for the surrounding road network.

The identified intersection experiences short periods of longer delays primarily during school pick-up periods associated with St Anthony's Primary School and Kingscliff Public School, as well as traffic movements associated with Kingscliff Shopping Village.

The intersection model was undertaken for the peak hour traffic generation and the delay results are the average for the peak hour.

The calculation of parking is based on 450 beds with 1200 staff, whereas the ultimate extent of the hospital will be 900 beds with 2,400 staff. This does not take into account patient or visitor numbers.

The assessment has been undertaken for yields nominated within the Concept Proposal.

The RMS Guide to Traffic Generating Developments was used to calculate the Project's peak hour traffic generation. Traffic generation rates nominated within the Guide to Traffic Generating Developments are based on historical traffic surveys and data analysis and utilisation of these rates is industry practice. As part of determining these rates, traffic surveys were undertaken for operating hospital sites and correlated to known variables (i.e. bed and staff numbers). The traffic generation rates therefore consider patient and visitor movements.

Any subsequent stages (e.g. future hospital expansion or other medical services not included in the concept proposal) would be subject to a separate application(s) as required. It is noted that neither the master plan, nor the SSDA contemplates a 900-bed hospital.

The traffic summary for the proposal is concept only. Future figures and plans are hypothetical, as no plans have been approved.

The EIS is for a Concept Proposal and Stage 1 Early and Enabling Works. The traffic assessment is not a concept. The Traffic Impact Assessment has been prepared to accompany an EIS application which seeks approval for Concept Proposal and Stage 1 Early Works. It is based on appropriate data and provides a suitable assessment of the Project.



3.8.2 Intersection Upgrades

Tweed Coast Road/ Cudgen Road signalised intersection

The nominated Option 1 upgrade of the Tweed Coast Road/ Cudgen Road signalised intersection is required before significant additional traffic movements are added to the current configuration, requiring construction early in the Stage 2 works. The bulk earthworks, foundation and piling works involved significant truck movements and these movements require the Option 1 upgrade to be functional. As such, the bulk earthworks, foundation and piling works should not be included as activities of the early and enabling Stage 1 application.

The referred “Option 1 Upgrade” has not been nominated to cater for construction traffic and nor is this implied in the Traffic Impact Assessment. These upgrade works highlight capacity and operational upgrades to improve operations under background traffic conditions in Year 2023.

Although a preliminary assessment has been provided, construction traffic is not subject to the same assessment requirements due to the temporary nature of construction. Instead construction is required to be undertaken in accordance with a detailed CTMP.

Estimated peak hour construction volumes are significantly less than that of the operational Tweed Valley Hospital and any required measures to address or limit peak period traffic impacts will be negotiated with Council.

Cudgen Road/ Turnock Street Roundabout

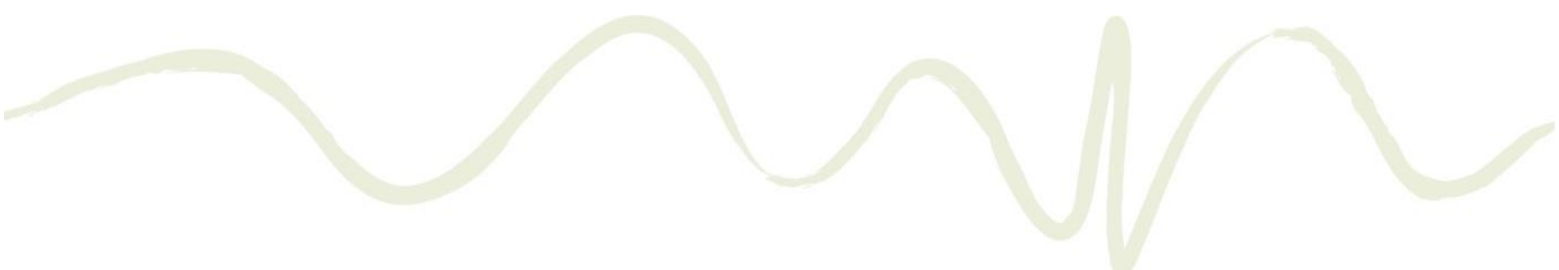
The layout diagram in the SIDRA analysis is incomplete, and should include a correct geometric layout. As significant bus movements and general traffic movements occur during peak periods, the Oxfords Street/ School movements need to be included in the assessment. The practical function of the roundabout is a single lane movement, not two lanes as shown. A swept path analysis is required for large vehicles that require the full pavement width to complete movements.

Signalised and un-signalised Intersection Design and Research Aid (SIDRA) Intersection layouts are for diagrammatic purposes and do not necessarily reflect an exact image of the geometry on-site.

The model inputs for the Cudgen Road/ Turnock Street roundabout accurately reflects the intersection layout, configuration and geometry and is therefore suitable for assessing the operations. This includes the south-eastern leg (namely Cudgen Road, noting that McPhail Avenue begins approximately 75 m to the east of the subject intersection).

Any minor deviation in the perceived geometry based on the diagrammatic SIDRA layout will not impact intersection assessment results.

It is noted that the Cudgen Road/ Oxford Street intersection (located approximately 40 m from the subject intersection) is a stand-alone intersection. Traffic surveys used as the basis for traffic modelling were undertaken at the Cudgen Road/ Turnock Street, and captured both morning and afternoon school peak periods. Any traffic using Oxford Street, that also uses the subject intersection,



was therefore captured as part of this survey. The traffic surveys also captured heavy vehicle proportions (including buses) and these were included in the modelling.

Sensitivity testing with changes to the number of lanes and swept path analysis, has been undertaken as part of subsequent analysis. Consultation between the Project team and Council is ongoing regarding changes at this intersection, as part of the proposed access leg to improve safety and operations (particularly for buses and heavy vehicles).

“South East Cudgen Rd” (actually McPhail Ave) is shown to have Level of Service (LoS) “A” during peak flows in 2023. Delays of two plus minutes currently occur during school peaks, so how can this table be correct?

The south-eastern leg is correctly referred to as Cudgen Road, noting that McPhail Avenue begins approximately 75 m to the east of the subject intersection. Cudgen Road continues north on the eastern side of the Kingscliff Tweed Regional Aquatic Centre (swimming pool) and McPhail Avenue continues east.

The traffic assessment has been undertaken in accordance with the RMS Guide to Traffic Generating Developments. This includes the modelling and assessment process. The intersection model was undertaken for the peak hour traffic generation models and the delay results are the average for the peak hour. It is noted that afternoon peak movements from Oxford Street are significantly concentrated, resulting in longer than average delays. However, outside this period traffic delays at Oxford Street/ Cudgen Road are low and well within acceptable limits.

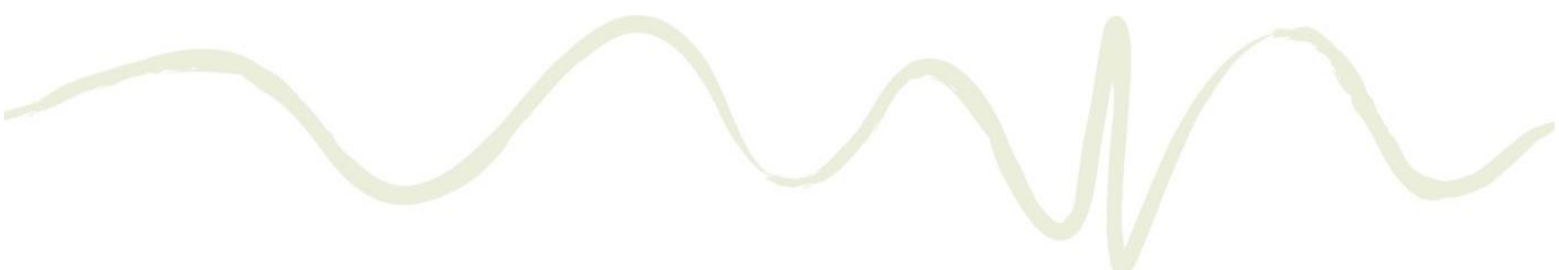
3.8.3 Regional Accessibility

It is questioned how the site will be accessed regionally, specifically elderly and vulnerable residents that current reside close to the existing TTH.

A Social and Economic Impact Assessment (SEIA) has been prepared as part of the EIS. The SEIA concludes that delivery of the Tweed Valley Hospital will have a positive impact on the availability of health services and facilities for both the local catchment and the Northern NSW catchment.

The Tweed Valley Hospital will be a major referral hospital at the heart of the network of hospitals and community health facilities located across the Tweed-Byron region. The need for the new hospital is driven by:

- The significant forecast population growth in the Tweed-Byron region, and in particularly the increase in the ageing population.
- The need for the health services in the Tweed-Byron region to be more self-sufficient, to give residents access to more services locally, without travelling outside the region.
- The need to implement modern healthcare models, to deliver high quality health services into the future.
- The constraints of current infrastructure at TTH, which is at a capacity.
- The physical limitations of the existing The TTH, which has inadequate space to develop new buildings and access is impacted by flooding.



The SEIA also acknowledges a marginal risk that the relocation from the Tweed Town Centre will result in reduced physical accessibility to community health services. However, the report finds that this can be potentially mitigated through the provision of a range of community health and other out-of-hospital services located in or close to the Tweed Heads Town Centre, as well as the improvement of public transport access between Tweed Town Centre and the new facility at Kingscliff. In this regard, a commitment has been made to ensure ongoing access to health facilities either at or close to the existing TTH once all acute services transfer to Tweed Valley Hospital.

The NNSW LHD has commenced planning for this, taking into consideration the best location for the delivery of health services across the health network. This planning activity will determine the level of care required locally, specifically taking into account vulnerable members of the community such as aged and immobile. This strategy will consider contemporary models of care, including healthcare that could be provided locally rather than at a hospital. In parallel, consultation with public transport and community transport providers has commenced, to enable appropriate planning for transport arrangements between Tweed/Tweed Heads and Tweed Valley Hospital.

A sustainable transport plan is currently being developed by a transport and parking working group, comprising representatives of the project team, TTH and Council, along with members of the Community Reference Panel. Early engagement activities have commenced, with detailed workshops and ongoing consultation planned for early 2019.

The site is too far from the M1 (Pacific Motorway)

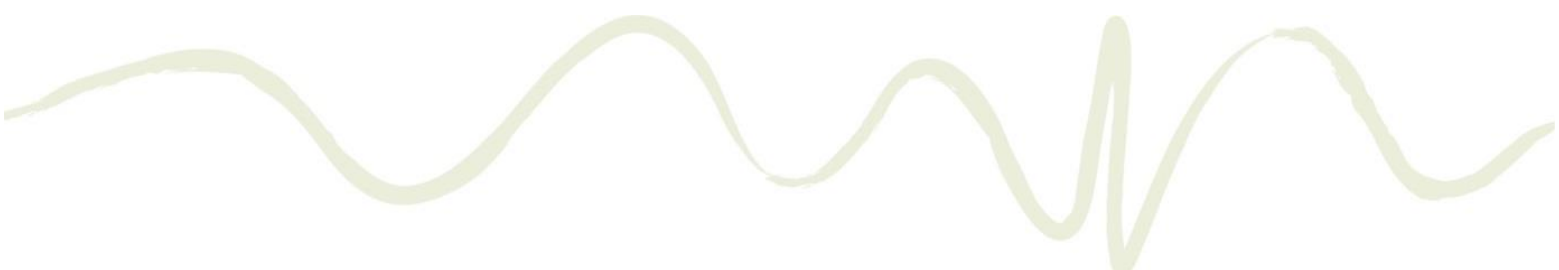
Location in relation to the M1 was a key consideration in selection of the Project Site. The site is:

- Located close to the M1, and adjacent to a major road (Tweed Coast Road).
- Located closer to the M1 than the existing TTH.
- Well located to service existing and future population centres across the Tweed-Byron region, providing timely access by car for the majority (70 percent) of the Tweed LGA part of the catchment in under 30 minutes, with an average peak travel time equivalent to TTH.
- Situated to take advantage of the existing public transport network, with two public bus routes currently passing or terminating at the site. Further upgrade/extension of services would be expected over time to service the increased demand from the hospital and major residential developments planned to the west and south of Kingscliff.
- An assessment of travel times has been undertaken, demonstrating an improved outcome for the majority of residents in the Tweed-Byron region.

3.8.4 Parking

The development will result in increased on-street parking in the surrounding residential areas, as well as adjacent land uses (TAFE, public swimming pool). This will impact on the amenity of surrounding residential areas. Parking on-site should be free to avoid these impacts.

The overall conclusion from the investigations carried out by Bitzios Consulting and presented in the Traffic Impact Assessment is that traffic, parking, access and circulation arrangements for the Project would be satisfactory and there are no traffic or parking impediments to the Project.



The Concept Proposal outlines the minimum parking requirements outlined by Council's Development Control Plan as well as the RMS peak parking accumulation (PPA) for the yield nominated within the EIS application.

Further to the EIS submission, a Transport, Access and Parking Working Group has been established to review car parking demand, supply and operations. The working group will review impacts that the Project may have on the on-street parking supply and on nearby off-street car parks (including the Kingscliff TAFE car park). The working group will investigate and develop strategies to determine the appropriate parking provision and address parking impacts to the surrounding area. This would form part of Stage 2. Key focus areas include:

- Reviewing site specific parking demands with consideration to the parking supply and impacts to the surrounding land uses and streets.
- Developing a Green Travel Plan and a Transport Access Guide to encourage the use of alternate transport modes where practical.
- On-site car parking operations including time limits, pick-up/drop-off, disabled parking and staff parking.
- Investigating the need for measures external to the site to discourage adverse external parking impacts.

The site is too constrained due to buffers to accommodate the future stages of the development, and sufficient parking.

Subsequent stages (e.g. future hospital expansion or other medical services not included in the Concept Proposal) would be subject to a separate application(s) as required and would be related to works for potential future expansion of the facility. Assessment of associated parking demands would be undertaken as part of any subsequent future application(s).

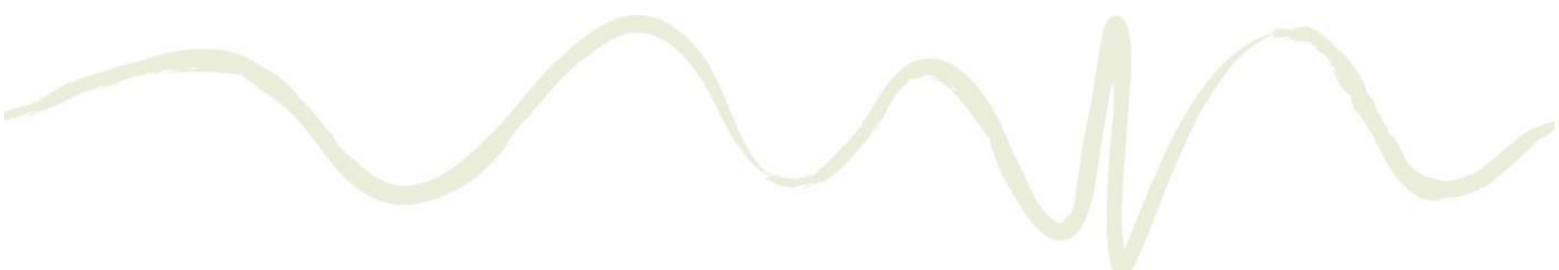
The proposal will result in parking issues at TAFE, Swimming Pool and Library car parks.

The Transport, Access and Parking Working Group has been established to review car parking demand, supply and operations. The working group will review impacts that the Project may have on the on-street parking supply and on nearby off-street car parks (including the Kingscliff TAFE, TRAC Kingscliff and Kingscliff High School car parks). This would inform the detailed design and final parking arrangement to be presented in Stage 2.

There is no on-street parking in Cudgen Road for the hospital. As a result, surrounding residential roads will be utilised for parking. On-site parking is poor.

Section 3.9 of the Traffic Impact Assessment reviews existing conditions surrounding the Project Site. No comment is made that local streets are to be used for parking.

The traffic assessment reviews parking requirements for the site in accordance with Council and RMS requirements. This notwithstanding, the Transport, Access and Parking (TAP) Working Group has been established to review car parking demand, supply and measures to mitigate external impacts.



The current application includes at-grade car parking and the final arrangement and provision would be adequate to cater for the hospital and will be informed by the TAP's findings.

The statement "Providing additional parking beyond the requirement will unnecessarily increase parking demand and private vehicle utilisation" is disputed in the context of a regional referral hospital. Further, it is considered that 1.6 bays per bed is vastly under planned, no matching the anticipated 11.81 trips per day per bed. The provision of only 700 parking bays is considered a shortfall.

Parking provision and Travel Demand Management for the site is being developed with consideration to the TfNSW's Future Transport Strategy for Regional Areas.

The Project site has a range of transport options available and is not limited only to private vehicle access. These include walking, cycling, public transport (bus) and community transport.

Parking provision and daily traffic generation rates are referred to out of context as car parking spaces can be used multiple times in a day by staff and visitors.

The Transport, Access and Parking Working Group will review the site-specific car parking demand, supply and operations, the findings of which will inform Stage 2. This will include a critical review of the impacts to the on-street parking supply and on nearby off-street car parks (including the Kingscliff TAFE, TRAC Kingscliff and Kingscliff High School car parks).

3.8.5 Construction Stage Issues

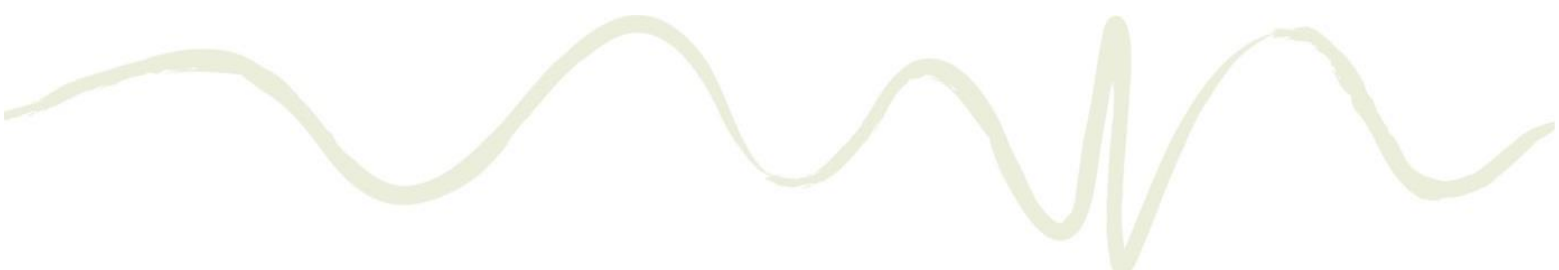
It is noted that submitters raise concern in relation to traffic and parking during the construction stage. As the construction period is of a temporary nature and detailed construction methodologies and documentation are prepared by the construction contractor(s) prior to commencement of works, a preliminary assessment is included in the Traffic Impact Assessment which addresses the ultimate operational requirements of the intended development. It is however noted that a detailed CTMP will be required prior to commencement of construction.

The following responses are provided to construction stage comments raised in submissions:

No data is provided for the construction stage parking, including an on-site parking layout plan. With up to 1,200 construction workers, construction parking will occur in surrounding residential streets.

Construction parking is temporary and is therefore not shown in detail on plans. For all stages of construction, the future permanent carparking areas will be prioritised to enable their use for Workers Carparking. During Early Works, labour peak is estimated to be around 40 to 50 workers, with 25 to 40 cars expected on-site. During Main Works, labour is estimated to peak just over 400 workers, with some 250 to 300 cars expected on-site. During both stages parking will be accommodated within the site.

All construction parking is planned to be accommodated on the Project Site in the form of temporary hardstand parking.



Construction traffic has been modelled off the New Maitland Hospital. The New Maitland Hospital is accessed from a four-lane highway, whereas the proposed Tweed Valley Hospital will be accessed from a two-lane road, five kilometres from the highway. The Tweed Coast Road upgrade is currently only scheduled for completion in 2033.

Construction traffic volumes have been assessed with consideration to the new Maitland Hospital given the similar scale of construction required. No reference has been made to the surrounding road network capacity or operations in Maitland. Construction traffic will be managed under a CTMP.

The CTMP will include measures to mitigate any impacts, particularly during peak periods (e.g. delivery scheduling).

The nominated Option 1 upgrade of the Tweed Coast Road/ Cudgen Road signalised intersection is required before significant additional traffic movements are added to the current configuration, requiring construction early in the Stage 2 works. The bulk earthworks, foundation and piling works involved significant truck movements and these movements require the Option 1 upgrade to be functional. As such, the bulk earthworks, foundation and piling works should not be included as activities of the early and enabling Stage 1 application.

The referred “Option 1 Upgrade” has not been nominated to cater for construction traffic and nor is this implied in the Traffic Impact Assessment. These upgrade works highlight capacity and operational upgrades to improve operations under background traffic conditions in Year 2023. Construction traffic is not subject to the same assessment requirements due to the temporary nature of construction. Instead construction is required to be undertaken in accordance with a CTMP.

Estimated peak hour construction volumes are significantly less than that of the operational Tweed Valley Hospital and any required measures to address or limit peak period traffic impacts will be negotiated with Council.

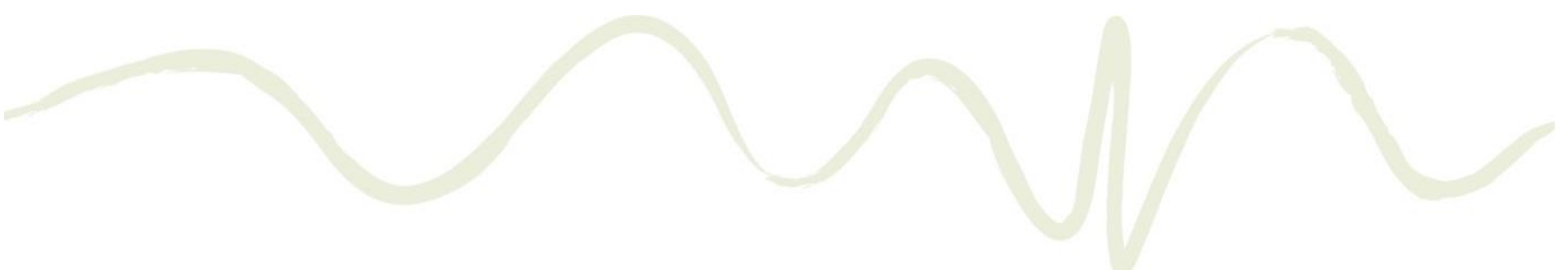
Cudgen Road is the main access to Kingscliff and already has significant morning and afternoon peaks. Existing turning movements occur into both the Matt and Mates farm store and the Kingscliff Tafe, and the Swimming Pool roundabout is of low capacity and very congested during the morning and afternoon.

The site access from Cudgen Road should be left in and left out movements only and for clarity the position needs to be properly identified and should be assessed as part of this application.

What is the need or purpose of a secondary access point for the early and enabling works?

Construction of this entrance would involve removal of trees that form a north - south environmental link to the nature reserve areas. Accordingly, this entrance should not be installed without or before final design and assessment.

The Cudgen Road/ Turnock Street roundabout was assessed as part of the Traffic Impact assessment for both background traffic volumes and design traffic volumes (i.e. background plus Project) for the



year of opening and 10-year design horizons. The subject roundabout was determined to operate within acceptable performance thresholds under all scenarios. Estimated construction traffic volumes are significantly lower than volumes generated by the operational Tweed Valley Hospital.

Multiple construction accesses allow for separation of heavy and light vehicles and facilitate appropriate levels of access to the various sections of the Project site during construction.

Construction site accesses will be managed under a detailed CTMP which will incorporate appropriate traffic management measures (such as signage and traffic controllers) to ensure the safe and efficient operation of site accesses and the external road network.

Construction accesses are proposed in locations that generally align with either the ultimate Project access locations or existing site accesses to minimise environmental impacts (including vegetation removal). Vegetation removal has been assessed by an arborist and environmental consultant.

As outlined in Section 5 of this Submissions Report, west and east access points to the Project Site (as proposed in the Concept Plans) are now sought to be included in the scope for Stage 1 Early and Enabling Works. These will also support safe and efficient construction access to and from the Project Site.

The usual early and enabling works do not require large truck and delivery movements and according do not have a major impact to the community.

Bulk earthworks, piling and permanent culverts/ roadworks should not be included in the Stage 1 permitted activities, and should be included and assessed with the Stage 2 application by the Proponent.

Large truck movements associated with bulk earthworks and foundation works will have major impacts to traffic, and this work should not be commenced until the Cudgen Road upgrade and other detailed designs have been completed and the final Traffic Management Plan assessed and issued with the Stage 2 application by the Proponent

The inclusion of early and enabling works as a Stage 1 component of the project is acceptable and a typical approach for large developments. The Stage 1 Early and Enabling Works have been assessed as part of the EIS, in accordance with the SEARs.

Detailed construction methodologies and documentation (including a CTMP) are prepared by the construction contractor. In order to commence construction, the construction contractor is required to have in place all relevant approvals and applications with Tweed Shire Council (e.g. Construction Certificate). The requirement for a CTMP is generally included as part the conditions of approval.

If oversize and/or over mass vehicles and loads are required, approval is required from RMS.



3.9 SEAR 8 - Ecologically Sustainable Development

3.9.1 Site Selection – Intergenerational Equity

A key principle of Ecologically Sustainable Development (ESD) is intergenerational equity. The loss of SSF impacts on this, and the Environmentally Sustainable Design Report (ESDR) does not address this.

Site selection is outside of the scope of the ESDR, which is limited to sustainable design and construction of the building and infrastructure on the Project Site.

The principles of ESD in the context of the Regulations were considered in the EIS, including intergenerational equity. The small loss of SSF on the urban fringe has been addressed previously in this report and deemed to be acceptable on the basis of the assessment undertaken.

3.9.2 Scope of Report

The ESD report does not have sufficient detail, and is primarily focussed on standard guidelines within the industry.

The scope of the ESDR for this stage of the process is limited to sustainable design and construction of the building and infrastructure on the Project Site. Given the stage of the proposal being for a Concept Proposal and Stage 1 Early and Enabling Works, the scope and principles of the ESDR are acceptable and provided a basis for detailed design and further consideration in Stage 2.

Further details of ESD measures and compliance for the hospital project would be submitted with the EIS for the Stage 2 SSDA, once design is completed.

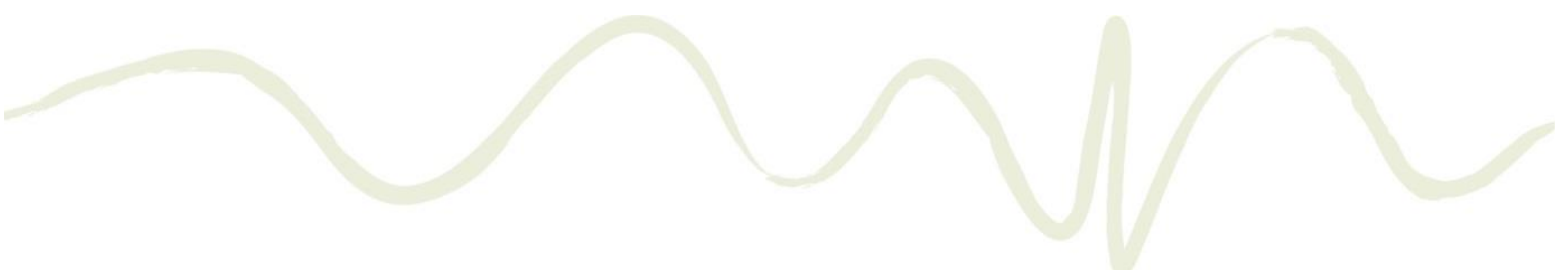
3.10 SEAR 9 - Social and Economic Impacts

3.10.1 Site Selection

The EIS has not demonstrated that the site is the only feasible option. It did not consider the potential availability of infrastructure at the opening date, rather than the present. Nor was the long-term regional demography considered in determining location.

Site feasibility was demonstrated at site selection stage, and is contained in the published Site Selection Summary Report, appended to the EIS at Appendix H.

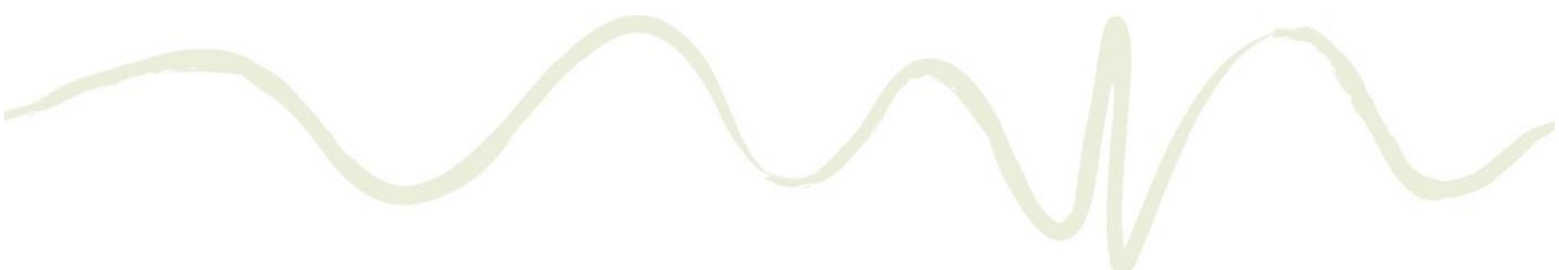
Refer to Section 3.1.3 of this report for a further discussion on the relevance of site selection to the EIS process, and Section 3.1.3.1 in relation to determining site feasibility.



The full feasibility study into the existing Tweed Heads Hospital, demonstrating that expansion is not possible, has not been released. Land is available for purchase adjacent to the site allowing for the expansion of the hospital in this location. It is noted that access is affected by flooding at all locations considered, including the Project Site.

Several issues relate to the decision to locate the hospital on a greenfield site:

- Master planning studies to redevelop TTH were conducted in 2013 and 2016. Both studies contemplated the re-use of existing building stock (built between 1972 and 2007) and new-build limited by available space. Master plans were reliant on a staged build and decant program, noting challenging operational issues during the lengthy construction program, including: noise; vibration; and access restrictions.
- The previous master planning studies referred to by submitters contemplated a limited planning horizon, exclusive of a further expansion or building renewal strategy. The master planning studies demonstrate the capacity restrictions of the current site in terms of delivering contemporary models of care, contemporary learning and research capability, technological innovation and sufficient built infrastructure to meet the needs of a growing and ageing population. A design study was completed on the existing site of TTH, which considered acquiring land around TTH; building the new hospital; decanting services and demolishing the existing buildings; and then using the existing site for future expansion and complementary uses. This comparison study reaffirmed that the redevelopment around the existing hospital site was not a viable proposition. The Site Selection Summary Report, published to support the announcement of the Project Site summarised the findings of the feasibility assessment, stating that:
“The existing four hectare site is built-out and has inadequate space to develop new buildings. The site is constrained on all four sides by public roads; medium density residential developments to the north and south; Tweed River to the east and a major community recreation facility to the west (Tweed Heads Bowls Club). The location of the existing Tweed Hospital site does not provide equitable access to the broader Tweed-Byron catchment and is inaccessible in a Q20 flood event for the population south of the Tweed River.
Major redevelopment of the site is contingent on an engineered solution to build critical hospital infrastructure above the PMF, this includes building the Emergency Department and hospital entry one level above ground level, requiring vehicle ramps and elevated ambulance/access decks. A multi-deck car park with a bridge link is also required to provide external areas above the PMF to support disaster response and compensate for lost car parking spaces.
The additional costs involved with the overall solution for this site would significantly impact on the budget available to build clinical space. The resulting impact on clinical services would be unacceptable.”
- Assessment of the overall capital cost for redeveloping TTH indicates that it is unaffordable. The major cost factors are the requirement for an engineered solution to provide suitable flood immunity and the likely land acquisition costs. The estimated overall cost impact is up to 20 percent of the construction cost of the redevelopment, which would significantly impact on the budget available to build clinical space.
- The Tweed Valley Hospital will be a major referral hospital at the heart of the network of hospitals and community health facilities located across the Tweed-Byron region. The need for the new hospital is driven by:
 - The significant forecast population growth in the Tweed-Byron region, and in particularly the increase in the ageing population.

- 
- The need for the health services in the Tweed-Byron region to be more self-sufficient, to give residents access to more services locally, without travelling outside the region.
 - The need to implement modern healthcare models, to deliver high quality health services into the future
 - The constraints of current infrastructure at TTH, which is at a capacity.
 - The physical limitations of the existing TTH site, which has inadequate space to develop new buildings and access is impacted by flooding.
- The existing TTH is located at the far north of the Tweed LGA, which does not provide equitable access for the Tweed-Byron population. Despite being readily accessible to the residents of Tweed Heads, any residents attending from within the southern part of the catchment area have considerable travel distances in order to attend their major referral hospital. The location of TTH at the far northern end of the catchment also maximises the distance for hospital transfers from Byron Central Hospital (BCH) and Murwillumbah District Hospital (MDH).
 - Flooding is a key risk across the Tweed Valley region and ensuring that the major population centres retain access to acute hospital services under 5% and 1% Annual Exceedance Probability (AEP) (also referred to as Q20 and Q100) flooding events are important considerations. TTH sits approximately two to three metres below the Probably Maximum Flood (PMF) level. Retention of access to TTH during a major flooding event is a key issue for TTH, as was demonstrated during the 2017 floods, during which the existing and growing population centres to the south of Tweed River became cut off from access to the full range of acute hospital services.
 - This emphasises the need to consider equitable access arrangements, and the advantages of a more central location for the future Tweed Valley Hospital in relation to the broader Tweed-Byron region. It is noted that residents from the areas to the north of the Tweed River would be able to access Robina Hospital within approximately 30 minutes in a flooding event.

In relation to flooding, the site selection process balanced a broad range of criteria of which flooding and flood access are part. However, there is little merit in assessing road access to the Project Site during a Probable Maximum Flood. This flood is considered a worst-case scenario and has an occurrence frequency in the range of one in many thousands of years. It is expected that during such an event in the Tweed Valley there would be widespread and sustained damage to extensive areas of existing housing, and most roads will be closed at one or multiple locations.

The Project Site allows the hospital and its road accesses to be constructed above the PMF, providing a place of refuge. This is a mandatory requirement for site selection for new hospitals in NSW, designed to prevent a full evacuation of the hospital, rather than ensure uninterrupted access. This was not possible at TTH, without incurring significant costs that would substantially affect the delivery of clinical services.

In some instances the EIS uses the distance from residential development as an advantage, in other the proximity to residential as a benefit. This is contradictory.

The benefits of proximity to or distance from residential development are examined in the SEIA in two contexts. On a site-specific level, the lack of residential development immediately adjacent the site, helps to mitigate localised issues. From a whole of hospital catchment perspective, the more centralised the hospital is relative to the population it will treat, the more efficient the accessibility and serviceability is likely to be.



3.10.2 Impact on Tweed Heads

Removing the hospital as the key economic driver from Tweed Heads will impact the local economy.

A Social and Economic Impact Assessment (SEIA) has been prepared as part of the EIS. The SEIA concludes that delivery of the Tweed Valley Hospital will have a nett positive impact on the availability of health services and facilities for both the local catchment and the Northern NSW catchment.

The relocation of TTH from the Tweed Town Centre to Kingscliff is in the short-term a net transfer effect in the NSW economy, as the immediate impact is merely a relocation of employment and output from one location to another within the region. At a regional level, the project is predicted to have a significantly positive indirect economic outcomes in terms of its effects on employment, output and gross value added across the Tweed-Byron and New South Wales economy.

At a local level, the SEIA acknowledges that the relocation of the hospital away from Tweed Heads will have a short-term negative impact on trading levels and perceptions of centre vitality. The SEIA concludes there will continue to be health services provided in the Tweed Heads Town Centre (HealthOne).

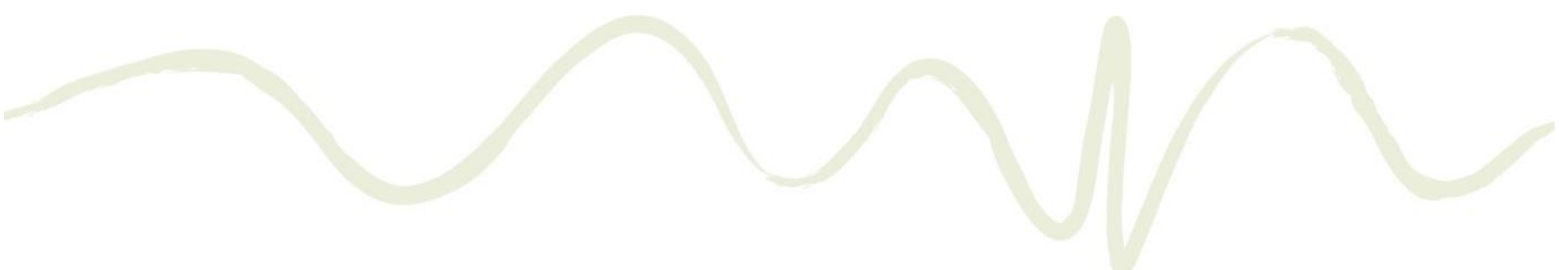
The potential vacating of part or all of the existing site provides significant opportunity for new economic and social infrastructure through alternative uses to populate in the medium-to-long term. In property development terms, the existing site is well positioned near the Tweed River and possesses relatively strong levels of amenity. It could be occupied by other strategically important uses that serve the local and regional population. More specifically, aged care, residential, tourism, education and accommodation uses are all just as, if not more suitable in this location than a hospital; and would more likely provide their own package of stimuli for the nearby traders – whilst potentially enhancing the amenity of the precinct through street activation, attractive visual presentation and distinctive store frontages – all elements which hospitals are typically unable to contribute.

Further, a commitment has been made to ensure ongoing access to health facilities either at or close to the existing TTH once all services transfer to the Tweed Valley Hospital. The NNSW LHD has commenced planning for this, and will determine the level of care required locally, specifically taking into account vulnerable members of the community such as aged and immobile. This strategy will consider contemporary models of care, including healthcare that could be provided locally rather than at a hospital. This will ensure a continuation of health services as a component of the Tweed Heads economy, albeit reduced.

NNSW LHD is planning the establishment of the HealthOne facility with services that will complement those at TTH. The scope and scale of the HealthOne facility will be further developed in coming months, but the HealthOne will provide Community and Allied Health services to the population of Tweed Heads, Tweed Heads South, Tweed Heads West, Terranora and Cobaki.

The following services are being considered for inclusion in the HealthOne:

- Aboriginal Health and Integrated Aboriginal Chronic Care (IACC).
- BreastScreen
- Child and Family Health services;
- Chronic Disease Management
- Community Nursing and Breast Care;

- 
- Day Therapy;
 - Hospital in the Home;
 - Harm Reduction, Needle and Syringe Program and HARP Health Promotion;
 - Older Person services;
 - Oral Health
 - Podiatry;
 - Women's Clinic; and
 - Midwifery Group Practice

Note that this list is currently in draft form pending further consultation.

Tweed Heads residents will have the option of either accessing services at the HealthOne facility, or travel to the Tweed Valley Hospital Ambulatory Care Centre with an estimated driving time (EDT) of 20 minutes to access the full range of Community and Allied Health services and Outpatient services.

Tweed Heads South and Banora Point residents will be able to travel north or south with the same EDT (20 minutes) to access services at the HealthOne facility, or the Tweed Valley Hospital Ambulatory Care Centre.

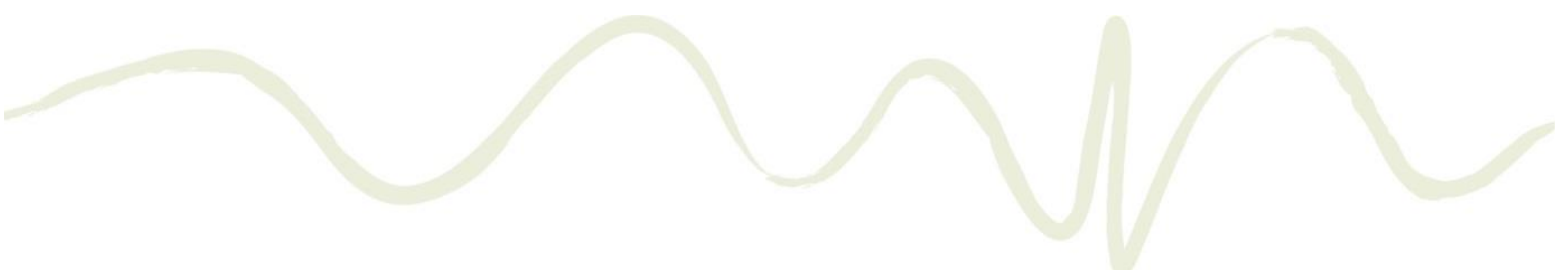
In terms of the short versus long-term nature of the negative economic impact to the Tweed Heads – this is in acknowledgement of the fact that in the long-term, the TTH site has potential to redevelop for other uses, some of which may become more productive to the local and regional economy in the long-term.

It is acknowledged that the proposal does not identify what these are and that economic development strategies are distinct from a planning proposal of this nature. Notwithstanding this, further work has been undertaken to understand the social and economic impacts on Tweed Heads and potential mitigation measures, including identifying likely future uses for further investigation.

Current numbers on the value of the visitor economy to Tweed is \$491,000.000. This will be impacted on due to the hospital relocating.

This statistic is acknowledged. However, it is important to conceptually disentangle the visitor economy in terms of general tourism versus visitation associated with TTH. Relevantly:

- TTH does not in its own right constitute a tourist destination. Therefore, the relocation and expansion of the TTH will not improve or reduce the attractiveness of either Tweed Town Centre or Kingscliff as tourist destinations.
- TTH does attract visitors, many of whom will stay nights in accommodation and potentially spend some money on food and other services. The relocation of the hospital will in the long-term result in a transfer effect for these visitations and expenditures in the sense that the expenditure associated with the hospital in Tweed will now occur in Kingscliff. No net change to the regional or NSW economy will occur from this transfer effect.
- The relocation of the hospital away from Tweed Heads provides an opportunity for the site to potentially develop in support of the region's tourism economy, either as an attractor itself or to support accommodation. This has been the subject of further analysis, outlined in the report at **Appendix M**.



The relocation of the hospital will result in job losses within in surrounding businesses in Tweed Heads.

It is acknowledged that some businesses that associate themselves with a hospital will follow the hospital to its new location. This is known as an economic transfer effect, and unlikely to actually result in a net community benefit or loss to the regional or NSW economy. Jobs in Kingscliff are still be relatively accessible for Tweed residents.

Additional information and a response to submissions regarding the social and economic assessment, supplementing the SEIA has been prepared, attached at **Appendix M**, which considers both the existing economic character of Tweed. This updated analysis finds:

- Both the resident workforce and the jobs located within Tweed Heads – Coolangatta display a prominence of population serving industries. This is partially owing to the influence of tourism within the area, however it is likely to be substantially driven by the residential character of the areas under consideration and the position of Tweed Heads – Coolangatta in the centres hierarchy throughout the Tweed Valley region. Increases in population within the region will serve to grow demand within these industries.
- Knowledge intensive and industrial activities typically present at notably lower rates than the average across NSW and Queensland, resulting in the area being unspecialised in many of these industries in terms of both jobs and the number of employed residents. This indicates that the viability of these uses would likely be constrained in the area, particularly in regard to footloose professional or financial services, given that these activities seek out concentrations of similar or supportive firms and a suitable labour market.
- Employment within the Healthcare and Social Assistance industry represents a significant part of total employment within the areas examined and while hospitals constitute a large proportion of this employment, it is spread across a variety of subclassifications. Aged care services constitute a considerable proportion of employment within these industries.
- The resident population within the workforce catchment is ageing, with a higher than average proportion of residents aged 65 years and over, and a higher proportion of residents approaching retirement age. This indicates that further shifts towards population serving industries and aged care services into the near future.
- Whilst tourism is important in the area, Tweed Heads – Coolangatta does not display a particularly significant competitive advantage over the comparison regions. On a small area level, the bulk of tourism activity is concentrated along the beachfront within Tweed Heads – Coolangatta, with the current hospital site being substantially disconnected from this area. As such, it is not anticipated that it would present a highly attractive location for the development of tourist accommodation.
- The employees of the hospital have a limited engagement with businesses in the surrounding area, with the interview results indicating that there was very little economic input in terms of worker spend originating from the hospital. This indicates that moving the hospital would not likely cause significant disruption to patterns of trade or threaten the viability of retail or food businesses within the area.

The social and economic response to submissions, attached at **Appendix M**, considers a range of alternative uses that could locate on part or all of the existing Tweed Hospital site.

In summary, these potential uses are:

- Aged care residential/ retirement living
- Residential development

- Commercial or government development
- Tourism
- Accommodation
- Education
- Retail
- A mixed-use development

While each have different characteristics and impacts, there are several recurrent positive social and economic impacts on the local Tweed Economy.

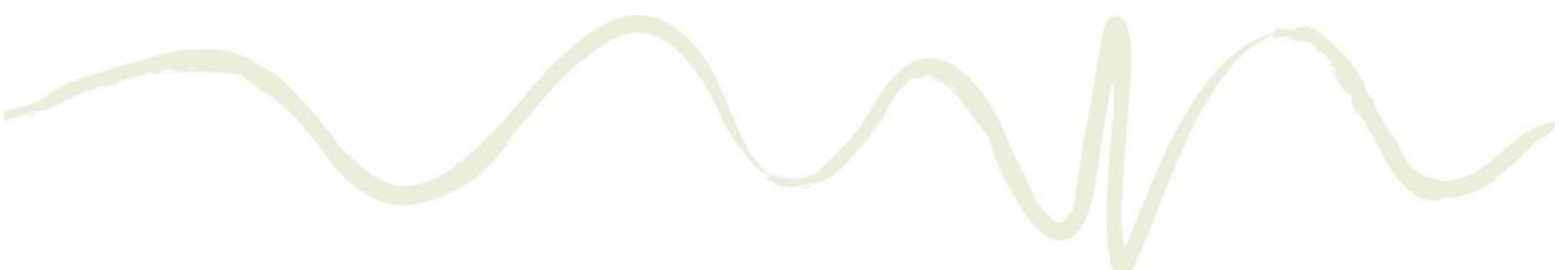
- **Increased expenditure in the town centre.** Many of the uses would likely increase the expenditure in the local economy. Residential and retirement villages would bring an increased population who would utilise local shops and facilities such as the bowling club. Tourism would attract people into the town centre who may not otherwise visit and this is likely to have a flow-on impact to local expenditure, particularly in cafes and restaurants. Accommodation uses such as a holiday park would also bring visitors into the local economy.
- **Provision of new economic anchor.** The establishment of a tourism anchor such as a gallery or adventure park would likely attract other complementary uses near to the site and into the wider centre. With the relocation of the hospital, Tweed Heads could reposition its economic development strategy towards supporting such a use.
- **Meeting demands of ageing population.** The population of the Tweed and surrounding regions is expected to continue increase its proportion of people aged 65 and over. Evidence indicates too that there is an inward migration of those aged 65 and over from outside of the region. The provision of certain age-care related facilities or retirement village would help to meet this demand and in so doing, provide a social benefit to the region.
- **Provision of social or cultural infrastructure.** The development of the site for cultural or education functions would increase the range of social infrastructure for residents of Tweed Heads and surrounds.

While the loss of the hospital will be felt locally by some, at least in the short-term, the site presents a number of locational characteristics that make it attractive for a number of other uses that will likely have a positive impact on the local Tweed Economy.

Existing residents in proximity to the hospital, in particular the elderly and vulnerable, chose to live in this location due to the hospital. Removing the hospital will reduce accessibility to medical facilities. The needs of ageing residents have been ignored.

A Social and Economic Impact Assessment (SEIA) has been prepared as part of the EIS. The SEIA concludes that delivery of the Tweed Valley Hospital will have a nett positive impact on the availability of health services and facilities for both the local catchment and the Northern NSW catchment. The SEIA also acknowledges a marginal risk that the vacated location in Tweed Town Centre will result in reduced physical accessibility to community health services. However, the report finds that this can be potentially mitigated through the provision of a range of community health and other out-of-hospital services located in or close to the Tweed Heads Town Centre, as well as the improvement of public transport access between Tweed Town Centre and the new facility at Kingscliff.

As outlined previously, the Tweed Valley Hospital will be a major referral hospital at the heart of the network of hospitals and community health facilities located across the Tweed-Byron region. Both the need, and the preliminary planning to provide health service within Tweed is discussed in preceding sections of this report.



Property values in Tweed Heads will reduce due to the relocation of hospital services.

A Social and Economic Impact Assessment (SEIA) has been prepared as part of the EIS. The SEIA concludes that delivery of the Tweed Valley Hospital will have a net positive impact on the availability of health services and facilities for both the local catchment and the Northern NSW catchment. The SEIA also acknowledges a marginal risk that the vacated location in Tweed Town Centre will result in reduced physical accessibility to community health services. However, the report finds that this can be potentially mitigated through the provision of a range of community health and other out-of-hospital services located in or close to the Tweed Heads Town Centre, as well as the improvement of public transport access between Tweed Town Centre and the new facility at Kingscliff.

In this regard the NNSW LHD has confirmed the provision of a HealthOne facility at Tweed Heads CBD. The implications of this are outlined in preceding sections.

Tweed Heads residents will have the option of either accessing services at the HealthOne facility, or travel to Tweed Valley Hospital Ambulatory Care Centre with an estimated driving time (EDT) of 20 minutes to access the full range of Community and Allied Health services and Outpatient services.

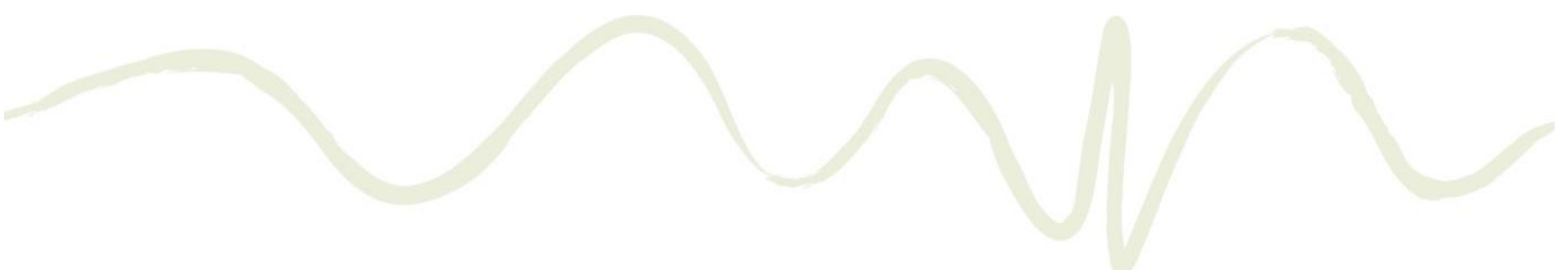
It is further noted that the Tweed Shire Regional Economic Development Strategy (REDS) 2018 was developed by the Tweed Shire Council in conjunction with the NSW Government, and make the following conclusions relevant to the subject project:

- The LGA has seen significant population growth in recent years.
- The Tweed Shire has a large proportion of dependent residents, either those over the age of 65 or under the age of 15. This number is increasing as a result of a higher proportion of residents moving to the LGA.
- The REDS identifies that the area's endowments should be leveraged to attract greater tourism activity, however the key focus within these recommendations is on diving nature-based tourism, and does not provide any actions or items where direct relevance to the current hospital site are identified.
- The document also suggests that it would be appropriate to revisit the Tweed Heads CBD master plan, and broaden it to a whole of region focus. This section notes as an initial opportunity "*options for repurposing the existing Tweed Hospital site*", but does not provide further specific direction other than to advocate for a broader Precincts Study for Tweed Heads and Kingscliff.
- The strategy acknowledges the key role played by population serving industries within the region in driving economic growth.

The SEIA notes that the negative impact on Tweed Heads will be short-term, and improve to the long-term. The evidence for this is questioned.

In terms of the negative social and economic impacts of the development being classed as moderate/medium, many of these impacts were actually assessed as 'high' at face value.

However, due to mitigation measures proposed by Health Infrastructure (including new bus services, on-site traffic/construction measures, design measures to minimise impact on adjacent rural lands etc.), the residual impact is likely to be lessened.



In terms of the short versus long-term nature of the negative economic impact to the Tweed Heads – this is in acknowledgement of the fact that in the long-term, the site has potential to redevelop for other uses, some of which may become more productive to the local and regional economy in the long-term. It is acknowledged that the proposal does not identify what these are and that economic development strategies are distinct from a planning proposal of this nature. Notwithstanding this, further work has been undertaken to understand the social and economic impacts on Tweed Heads and potential mitigation measures, including identifying likely future uses for further investigation.

It is further noted that the Tweed Shire Regional Economic Development Strategy (REDS) 2018 was developed by the Tweed Shire Council in conjunction with the NSW Government, and make conclusions relevant to the subject project, as noted previously.

3.10.3 Impact on Kingscliff

3.10.3.1 *Tourism*

The Hospital will impact Kingscliff's beach and fresh food tourism industry.

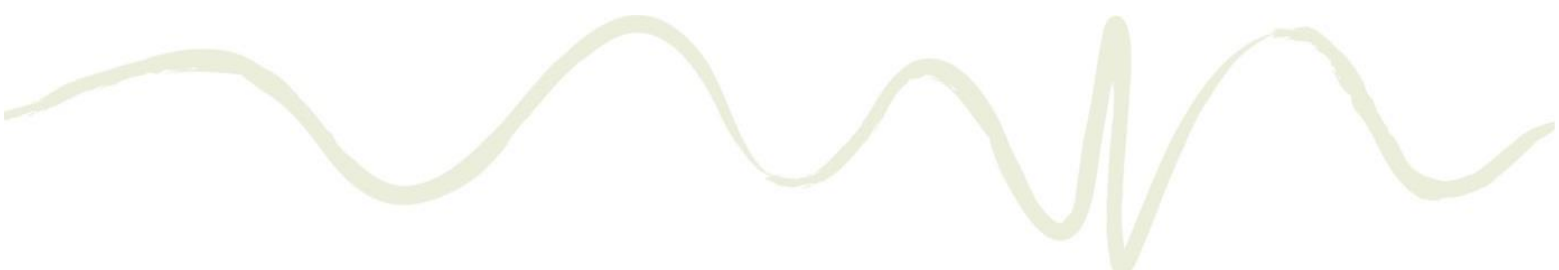
The Kingscliff Locality Plan (KLP) outlines that the Tweed Coast has seen exponential growth. The locality of Kingscliff in particular has been a major contributor to this growth, elevating its settlement status from a coastal village (<3000 residents), to a coastal town (3000-20,000 residents). Kingscliff's population could surpass the population threshold usually associated with a small coastal city (>20,000 residents, Coastal Design Guidelines for NSW). The KLP outlines that the existing role of the Kingscliff locality as the subregional centre servicing Tweeds' network of coastal villages (Fingal Head, Cudgen, Casuarina, Cabarita, Hastings Point, Pottsville and future Kings Forest) is anticipated to be reaffirmed. The KLP contains a vision for the area, including:

- "Expand employment generating land uses by providing land use opportunity for larger employment generating developments such as a business park, health and/or university campus, commercial and retail uses, as well as a range of student, tourist and residential accommodation types to build upon the existing industry pillars of tourism, agriculture, health and local small business."

This statement from the KLP clearly indicates the important and evolving role of Kingscliff as a subregional centre.

The Tweed Valley Hospital and allied uses are likely to attract visitors to Kingscliff as either employees or visitors who may contribute to the fresh food and beachside tourism industry.

The submitters comments primarily deal with the assertion that a new hospital will detract from Kingscliff's appeal as a tourist destination. This is refuted. For instance, the Tweed Town Centre currently possesses a hospital but is also considered a tourist destination in its own right. Tourism is one of the major industries in Tweed, alongside health services, social infrastructure (Tweed Bowls Club), retail and recreation.



Kingscliff's main economic drivers will change from tourism and small crop agriculture to health services, and will drive development of ancillary development such as additional shops, cafes and other facilities.

This set of comments raises two issues: (a) the hospital development will drive a change in local character (in terms of rezonings in particular) and (b) the Project Site has other productive use properties (agriculture), and therefore economic benefits will not experience a multiplier effect.

In terms of (a), a single hospital development is unlikely to generate momentum for a dramatic change in residential character. Hospitals are a separate special use category which is distinct from residential and commercial development. Indeed, there have been previous decisions in terms of zoning which have allowed for increasing volumes of urban densification which are unrelated to this proposed hospital development.

In terms of (b), whilst it is acknowledged that there is slight loss of agricultural productivity in NSW associated with the loss of one parcel of farm land, this negative impact has no bearing on the potential of the new use (the relocated hospital) to generate significant direct and indirect (wider) economic benefits to the NSW economy. The positive multiplier effects of the hospital will still occur.

The assertion that the presence of a hospital will ruin the viability of Kingscliff as a tourist destination is not supported. The Tweed Town Centre and adjacent Coolangatta currently possesses a hospital – but is also considered a tourist destination in its own right; indeed, tourism is one of the major industries in Tweed alongside health services. The location of the Tweed Valley Hospital is on the outskirts of the Kingscliff township and away from the tourism and local centre.

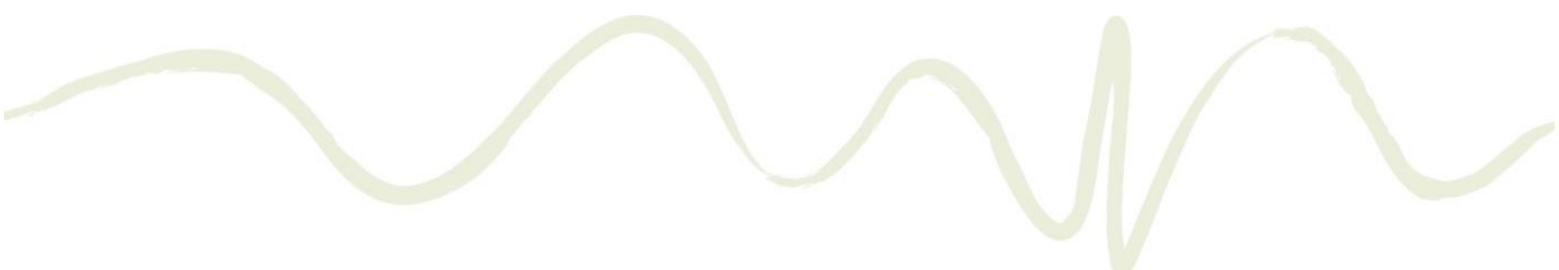
As noted above, the vision and content of the KLP clearly indicates the important and evolving role of Kingscliff as a subregional centre. Such attributes and future growth provide strong support for the selection of the Project Site being within this immediate locality. This allows the Tweed Valley Hospital to be established in the context of an existing urban area, supported by infrastructure and a growing locality that will deliver more housing, jobs and services.

The location for the new hospital at Kingscliff was chosen in part due its proximity to Kingscliff TAFE and the population centre in Kingscliff - which is expected to grow significantly over the coming years. It is envisioned that by collocating the new hospital with the TAFE, there will be significant scope and opportunity to develop a regionally significant health and education precinct over time.

The Project Site was also chosen for its large size to allow for future hospital expansion, should it be required, along with the ability to attract allied health services which typically prefer to locate within walking distance of anchor hospitals. The surrounding precinct has also been assessed to possess significant potential for population and employment growth in the future under the Kingscliff Locality Plan.

Development of the site will result in business and residential migration to Kingscliff, resulting in increased property demand, real estate prices and rental increases.

The Project Site was chosen for its large size to allow for future hospital expansion, should it be required, along with the ability to attract allied health services which typically prefer to locate within



walking distance of anchor hospitals. Allied health businesses associated with the hospital are being planned for on-site, rather than being expected to compete for existing business premises in Kingscliff.

The surrounding precinct has also been assessed to possess significant potential for population and employment growth in the future under the Kingscliff Locality Plan. Future housing development would be anticipated to be delivered to meet future demand that arises both from natural population growth as well as any demand generated specifically from the hospital. It is noted that the KLP contemplates significant housing development in the immediate area, along with the development of the Business and Knowledge Precinct, providing significant capacity to accommodate growth associated with the hospital development.

Consultation with public transport and community transport providers has commenced, to enable appropriate planning for transport arrangements between Tweed/Tweed Heads and Tweed Valley Hospital and connect the two centres and minimise the need for residents to relocate.

Further analysis has been undertaken to understand the profile of those working in the hospital and where they are coming from to work, and this is contained in **Appendix M**.

Residential migration of staff is not an automatic conclusion, given that the place of employment is only relocating approximately 14km to the south, noting travel time assessments were undertaken during the due diligence assessment. This identified that the average travel time to the Project site relative to the existing Tweed Hospital for the Tweed Shire population is similar and the Project site location increased the proportion of people able to travel to the site in less than 30 minutes. The Project site also has lower travel times for staff/patients/visitors travelling to and from Byron Shire.

The hospital will merge the Kingscliff and Cudgen communities.

The hospital will be self-contained and not constitute an urban environment. As demonstrated by the master plan and EIS, the large site size allows for future hospital expansion and health and education developments without encroaching on surrounding rural areas as well as the provision of appropriate buffers and strategies to minimise and manage potential land use conflict.

As the Project is for a public purpose/ infrastructure and given that the site was deemed the most suitable and the feasible option on the basis of an extensive review of potential sites, arguments that suggest the proposed hospital would set a precedent and could allow further urban development to occur on SSF are unfounded. The draft SEPP and rezoning process by DPE would also ensure that rezoning of the Project Site to SP2 Infrastructure does not have any unintended consequences beyond the Project Site. This zoning relates to essential State Significant Infrastructure.

Development of the Project Site would limit flow-on impacts to other SSF, as follows (refer Section 5.6 of the EIS):

- The site sits on the far north-eastern tip of the agricultural area – it is on the urban side of Cudgen Road, opposite Kingscliff TAFE and between existing residential areas of Kingscliff and Cudgen, with future residential developments planned to the north.
- The large site size allows for future hospital expansion and health and education developments without encroaching on surrounding rural areas as well as the provision of appropriate buffers and strategies to minimise and manage potential land use conflict.

- Strengthening partnerships between Health and TAFE provides further opportunity to ensure that all health an education and supporting developments can be accommodated across these two large and co-located sites in the future.
- As outlined in the Agricultural Impact Assessment, the Project Site affects the fringe of such mapped farmland and its location will not fragment the SSF of the Cudgen Plateau and would limit flow-on/ interface impacts to other farmland.
- The south-western tip of the Project Site is adjacent to agricultural land however this is not dissimilar to current circumstances in the locality where residential and education facilities (including Kingscliff TAFE) interface with adjacent farmland and coexist. Intensive agriculture clusters, being the primary area of the Cudgen Plateau (west of Tweed Coast Road), would be adequately protected as the development is not immediately proximal to this concentrated SSF farmland area of the Cudgen Plateau.
- The Project is for public infrastructure and not residential or rural residential expansion and would not set a precedent for such development.

On this basis there would be no further incremental or cumulative impact to SSF attributed, nor the merging of the distinct settlements of Kingscliff and Cudgen.

The hospital will change the demographic profile of Kingscliff. Lower socio-economic precincts will surround the hospital, due to issues such as traffic, noise, and safety dissuading people from living near them.

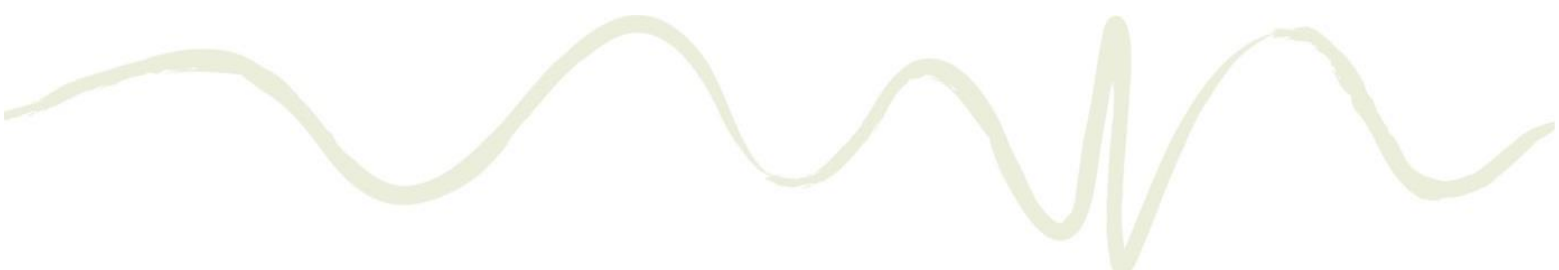
There are no plans for major residential development around the proposed hospital site. There is no evidence to suggest that a new hospital would lead to lower socio-economic precincts. The SEIA does acknowledge that any anti-social behaviour associated with the hospital would be better addressed at the new hospital, with its separation from residential areas, compared with the current location within Tweed Head town centre.

3.10.3.2 *Changing the Coast and Country/ Outdoors beach lifestyle of Kingscliff*

The development will change the character of Kingscliff through increased urbanisation including lighting. This will result in a loss of rural ambience and lifestyle.

The planning and design of the Tweed Valley Hospital, seeks to provide positive community orientated health promoting service with strong nature and landscape references. The schematic design of the hospital and integrated landscaped grounds will seek to extend and exemplify the healthy outdoor nature-orientated lifestyle, described of this area by exploring opportunities to provide through cycle-routes, walking trails on-site, provision of public accessible gardens and playgrounds. Landscape and site topography are a key source of inspiration to the project and will play a significant role in the design of the hospital's primary public domain environment, including entrance axis and orientating main public courtyards. Further design detail to be provided with the SSD/DA Stage 2 submission. The hospital design will aim to respond and reflect its regional location, which is dissimilar when compared with an "urban style hospital".

A relocated hospital is not considered 'intense urbanisation' that would generate the same change to lifestyle or ambience which would typically accompany many residential developments of a rural area for example.



Nonetheless, some of these issues are disclosed or addressed across the supporting studies. Many of have been acknowledged as low or medium level impacts.

The Project Site is situated at the rural/urban interface, on the urban side of Cudgen Road, opposite Kingscliff TAFE and between existing residential areas of Kingscliff and Cudgen, with future residential developments and potential urban release areas planned to the north. It can effectively integrate with the existing and emerging urban area of Kingscliff without fragmenting the rural landscape. The main rural area of Cudgen would remain intact and the broader surrounding rural character of this area would endure as a valued element of the locality and region.

The EIS includes a Visual Impact Assessment of the Concept Proposal that acknowledges that a new hospital on what is currently an agricultural site would be a modification of the local visual environment when viewed from various viewpoints in the surrounding locality, however appreciable views of various distant natural landscape features would remain. The design of the Tweed Valley Hospital will seek to minimise issues such as lighting and visual impact.

The hospital development will result in a change in the primary business focus from tourism and services to business associated with health/ medical. The development will change the healthy lifestyle associated with Kingscliff.

There is no substantive evidence to support the assertion that a single hospital development will transform a rural/healthy living lifestyle area into a community dominated by medical functions alone.

Health-related businesses are likely to locate within the hospital campus, rather than take over other tourism-related industries in the Kingscliff township.

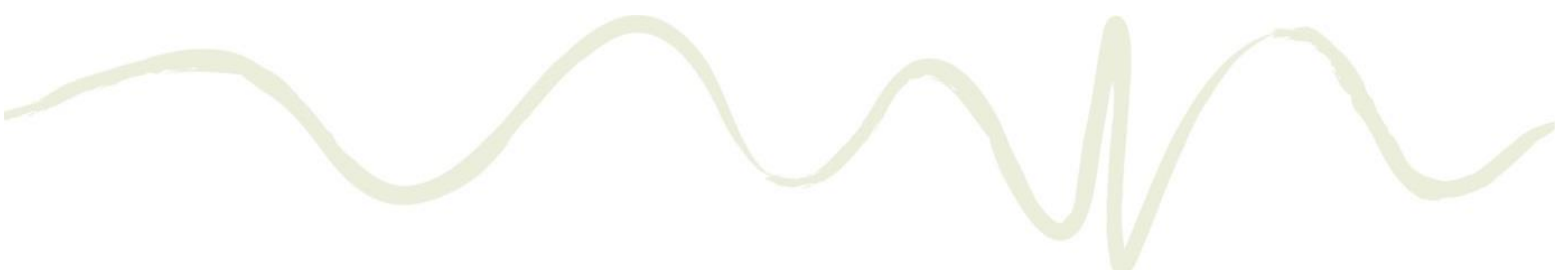
The closure of tourism and services within Kingscliff is only likely to occur if the underlying tourism driver for these changes, and this is unlikely to be driven by the development of a hospital.

The development will change the character of the area, from a rural character to urban through the loss of rural land. The site is integral to the identity of both Kingscliff and Cudgen, and as an entry to the region.

It is acknowledged that the rural lands of the area may constitute a particular cultural feature of the region and one that fringes the Kingscliff township. The development of the Hospital on a single site on the outskirts of Kingscliff does remove some of this agricultural land, but does not result in the loss of that character.

From a context perspective, the site is co-located with the TAFE, the swimming pool, and residential development, and is legibly part of the urban context of Kingscliff, as opposed to the rural fabric asserted by submitters.

The SSDA and EIS submission provides a proposal to develop a new Level 5 regional referral hospital on the Project Site. The hospital will seek to integrate harmoniously with the site topography and local landscape, leveraging 360-degree views of the local natural environment and surrounding culturally significant farmlands. This will provide the local community and patients alike with access to a therapeutic health environment.



Aviation movements would impact the amenity of Kingscliff, and surrounding areas. Aviation movements could occur up to two to three times per day, and at any time in a 24 hour period.

Tweed Valley Hospital is a Level 5 Regional Referral Hospital. As outlined in the introductory discussion on Understanding the Clinical Services Planning Hierarchy (Section 3.1.4), the Tweed Valley Hospital is not a tertiary facility, and will not deliver Level 6 trauma services as provided by Gold Coast University Hospital (GCUH).

Most helicopter movements will be pre-planned transfers of in-patients to higher level hospitals and these will occur mostly during daytime working hours. Inwards movements at night will be rare. Total numbers of movements at The Tweed Hospital currently averages 2 per week, there is expected to only be a slight increase on these numbers. Any notion that the Tweed Valley Hospital will have two to three movements per day is misplaced. That level of activity is only experienced by the “busiest” helicopter-capable hospital in the State of NSW (being the John Hunter Hospital).

The siting of the Helicopter Landing Site (HLS) within the TVH campus and recommended approach and departure flight paths have been selected with the concerns of residents in mind – avoiding overflying residential areas to the maximum extent possible. Local people closer to the hospital will notice the noise but the overall impact will be less per helicopter movement than is currently experienced by people close to TTH because the TVH HLS will be elevated while the existing HLS is ground level.

3.10.3.3 *Building Amenity and Town Character*

The visual amenity of Kingscliff will be impacted through the introduction of a large building into a generally rural environment. Existing large developments in the Tweed Coast have been carefully designed to complement and respect the zoning.

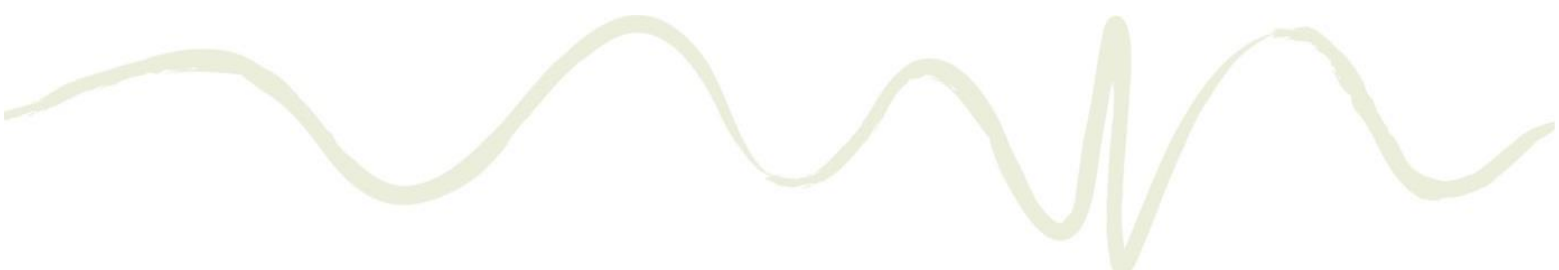
While attempts will be made in building design, a hospital building needs to comply with functional requirements, and therefore the impact cannot be mitigated to the same extent.

The concept design does not relate to the land use risk assessment requirements.

The proposal is different to other significant developments in the area, such as the TAFE which is low rise, and set in landscaped surrounds, and resorts such as SALT, which are residential in nature and set on much larger parcels of land.

As outlined elsewhere, the Visual Impact Assessment (VIA) is based on the probable visual impacts of the Concept Proposal for the Tweed Valley Hospital Project. This is based on the maximum planning envelopes, prior to the finalisation of built form and detailed design (which would occur at Stage 2).

An early block and stack building section form has been provided for information in **Appendix B**, drawing AR-SKE-51-003, to illustrate a “work in progress” building form as this is being developed within the maximum planning envelope. This section is indicative only and will be revised as design develops but has been included as an example to illustrate the anticipated reduced mass of the form compared to the maximum planning envelope within which it is to be developed. Detailed sections of the proposed hospital will be provided on completion of schematic design to be submitted with the Stage 2 SSDA.



The maximum planning envelope does not represent actual built form or massing, but rather the maximum envelope extents within which, through the detailed design process, the building and form would be developed and articulated.

The VIA assesses ten key views frames that are considered to be representative of various views experienced from the public and private realm, with a particular focus on visually sensitive receivers and those most that would be potentially the most affected. The associated montages have been updated (refer **Appendix B**) to reflect the revised maximum planning envelope (noting that the total volume has reduced). Whilst the site is prominent and is proposed to accommodate a major hospital, its location is suitably sited that it would not unreasonably dominate or overwhelm the broader Kingscliff or coastal area. The site is not situated in the immediate vicinity of tourist hot-spots or prominent accommodation and its visual impact/appearance is not expected to directly influence tourism, particularly as much of the locality's tourist facilities are situated and focused on the coastal strip and villages.

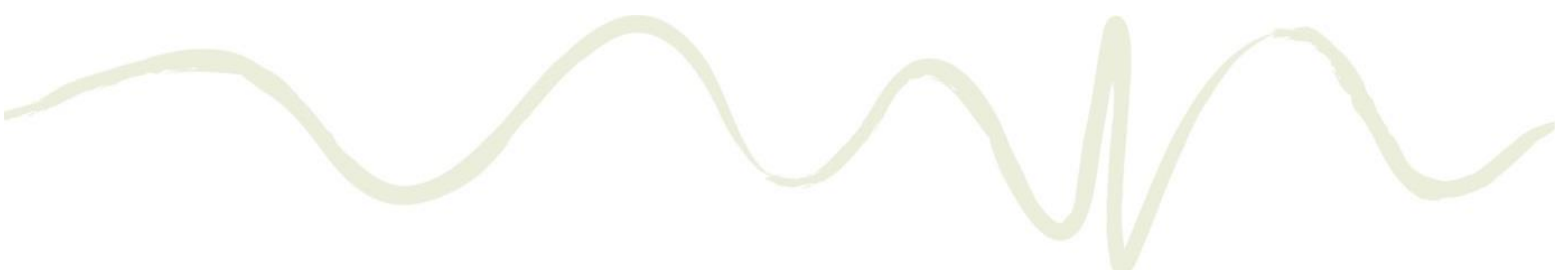
The referred to developments of Peppers and Mantra Resorts at Salt, whilst typically three storeys, are substantial developments in their own rights and would have some level of impact themselves when proposed and developed. The design requirements, including height, for tourist accommodation compared to a Level 5 hospital are very different. As discussed in the EIS and Built Form and Urban Design Report (Appendix C of the EIS), the building typology and arrangement (to be developed for Stage 2) has been selected based on key clinical and functional needs of a hospital, whilst also considering amenity and the visual impact.

These tourist developments, and others, are substantially separated from the Project Site and focus on the coastal area and associated environment and activities. The physical separation between the Project Site and Peppers and Mantra Resorts at Salt for example is a minimum of 1.4 km. When considering distant views there is typically notably reduced visual sensitivity to a development and therefore the Project is not expected to significantly or unreasonably impact the outlook of coastal resorts such as those referenced.

Further, it is noted that the Kingscliff Locality Plan identifies pristine coastal views. There will be no impact on these view lines resulting from the development.

It is noted that additional visual assessment would occur at Stage 2 to consider the impact of the proposed built form and measures to help minimise such impacts. The established view frames in the VIA prepared for the Concept Proposal would be revisited, and where identified necessary, further views of significance be identified and included within the abovementioned subsequent VIA, which will be submitted with the Stage 2 SSDA.

The proposed Tweed Valley Hospital will indeed be functional. While hospitals must address certain more industrial aspects of their functionality great care will be taken at schematic design stage to ensure these potentially "dominant functional features" are well placed and considered to minimize their potential negative impacts on the amenity of the hospital grounds and facility, and surrounding community visual amenity. While the hospital is proposed to be located on this prominent site, we submit that not all orientations of the hospital will be equally visually prominent from surrounding vantage points. For example, the primary ground level public domain interface, which includes the main hospital entrance and hospital street will be bias to the south east and east aspects of the hospital. The more utilitarian ED and logistics functions on the other hand will be discretely located on the lower ground and basement levels respectively, being located on the less visible south west orientation of the hospital. These functions are embedded in the ridge slope below the main entrance, which when complimented with appropriate landscaping will assist to conceal them from direct views from surrounding view locations and on entering the campus.



In relation to the Land Use Risk Assessment, a full response is provided in Section 6.2. The submitters suggested outcome is based on a literal interpretation of the LUCRA Report. Agricultural land uses to the south and west of the site will not limit the capacity to incorporate IPU windows which leverage access to the impressive 360-degree views surrounding the Project Site.

While the SEIA notes that west facing, and elevated residential areas will be affected, with residences likely to lose distant view of Mount Warning, it does not address the east facing impact, which is the main entrance to the tourist and day trip destination of Kingscliff.

The east facing residents identified in this submission that border with the Tweed Coast Road currently overlook the main Tweed Coast Road. These residences appear to be town houses with minimal private outdoor open spaces orientated east, it is also noted that yards are currently buffered with tree and hedgerow barriers.

The SSDA and EIS, and Appendix B drawings AR-SKE-53-201 and AR-SKE-53-202 in particular views 3 and 4, identify the Visual Impact of the maximum planning envelope which previously has been noted exceeds likely worst-case scenario as it does not take account of the advised diminishing density associated with the increasing height of the hospital.

3.10.3.4 *Safety and Security*

Kingscliff is a small town, with low crime rates. Introducing the hospital with associated social issues will introduce crime, safety and security risks, including issues relating to patients and visitors with drug and alcohol issues, as well as mental health issues. The police station in Kingscliff does not have the resources to deal with these issues, and does not operate 24 hours a day.

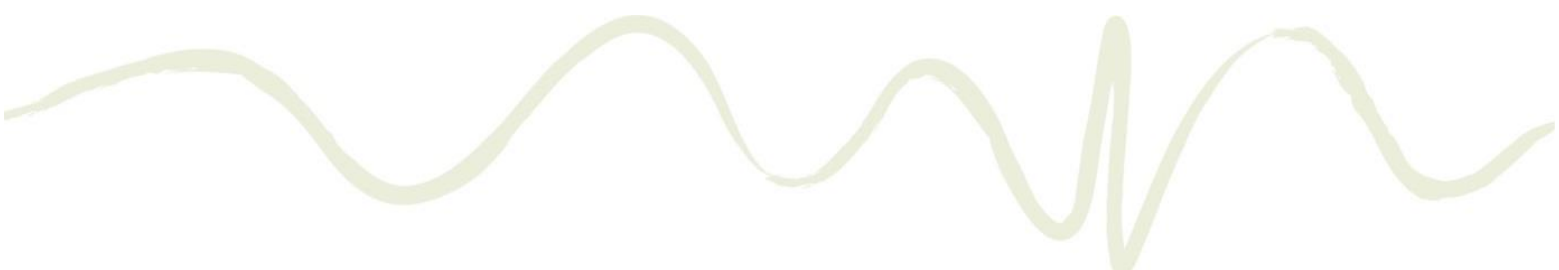
A high level of importance will be placed on the security and surveillance in the design of the proposal as part of the Stage 2 SSDA. It is considered that the proposed design measures will significantly reduce the risk of anti-social and criminal activity. The detail design will focus on public surveillance, not providing opportunities for concealed criminal behaviour and addressing all other principles of crime prevention through environmental design. The proposal cannot comment on the availability of a permanent police presence in Kingscliff.

3.10.3.5 *Impact on Farming*

The proposed development will result in the loss of future agricultural land. The proponent has not demonstrated that this is the only feasible site.

The Strategic Planning Framework that allows for SSF to be rezoned for use as Public Infrastructure is discussed and justified in Section 3.3.2.1.

The site-specific SEPP is being administered by DPE as a separate planning process to the SSDA. Submissions in relation to the SEPP will be addressed by DPE as part of that process.



The proposal will result in farming job losses. This includes the loss of further agricultural land, due to the expansion of the medical precinct. The value of crops, and the multiplier effect, as a contribution to the local economy has been overlooked.

It is noted that the SEPP amendment will result in the rezoning of the subject site only. This will result in the loss of only one direct job, with a maximum of only eight hectares farmed.

The economic impact assessment is not limited to jobs only. The SEIA documents the impacts to regional output and value added as well, with a specific focus on the loss of economic contribution from the current farming operations on-site.

The potential expansion of a medical precinct remains a potential future scenario and if it were to progress in the future, would be subject to a separate assessment of those impacts.

The development will result in the total land designated SSF falling below the 500 ha minimum to achieve this designation.

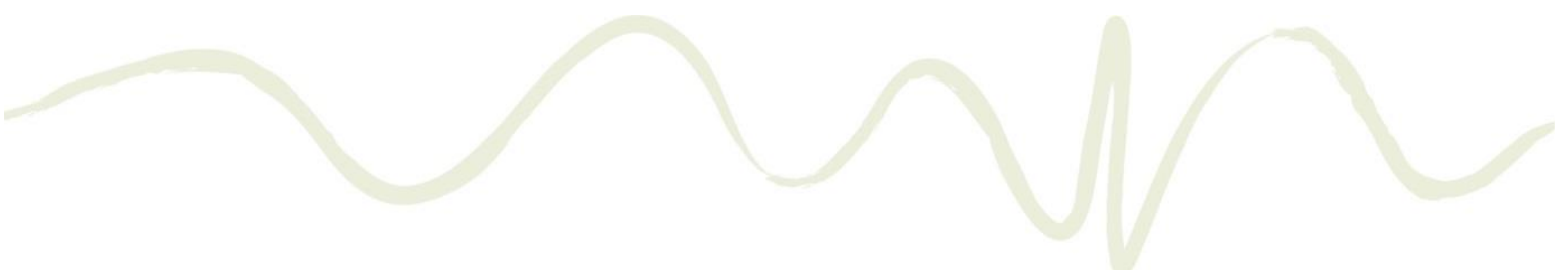
The Tweed Valley Hospital project would result in the loss of approximately 16 ha of mapped SSF. A review of the SSF mapping, undertaken by the project team, indicates that the total area within the Cudgen Plateau mapped as SSF is approximately 580 ha and not the 530 ha as referenced in the submission. A reduction in the SSF of 16 ha would not reduce the area to less than 500 ha. The NRPFP and Local Planning Directions include provisions to protect SSF from residential and urban development, with the only exception being for public infrastructure that has been supported by a thorough review of alternative sites. The project is for a public purpose/ infrastructure and the Project Site was deemed the most suitable and feasible option on the basis of an extensive review of potential sites.

3.10.3.6 *Other Land Uses*

The EIS has not addressed the requirements of the hospital and the impacts this could have on abutting services of schools and TAFE, as opposed to the existing farms and their practices. The existing farms are able to undertake sensitive practices like spraying outside of school hours. A hospital runs 24 hours a day. The EIS has failed to address how the current working farms that abut the site will be able to continue with current practices or will be compensated for eventual restrictions and therefore loss of income and business.

The comment around schools versus hospitals is acknowledged. The specific operational details would form part of an operational discussion with the hospital operators and adjacent land uses.

Additional comments on impacts on farming operations are addressed under the Land Use Conflict Risk Assessment section at Section 3.3.7.2 of this Submissions Report.



The EIS does not prove an assessment to substantiate an educational interest in health from TAFE.

The health and education precinct is a long-term ambition of the NSW Government. Consultation is underway with TAFE as a key stakeholder, for delivery of the health precinct as a partnership between NSW Government and TAFE.

3.10.4 Regional Considerations

3.10.4.1 Access

While the site is above the PMF, roads are not. In a flood event, the majority of residents north of Tweed River would lose access to the regional hospital.

All new hospitals delivered in NSW are required to be delivered at or above the Probably Maximum Flood (PMF) level and this criterion has been applied to site selection for the Tweed Valley Hospital. In this regard the selected site is adequate.

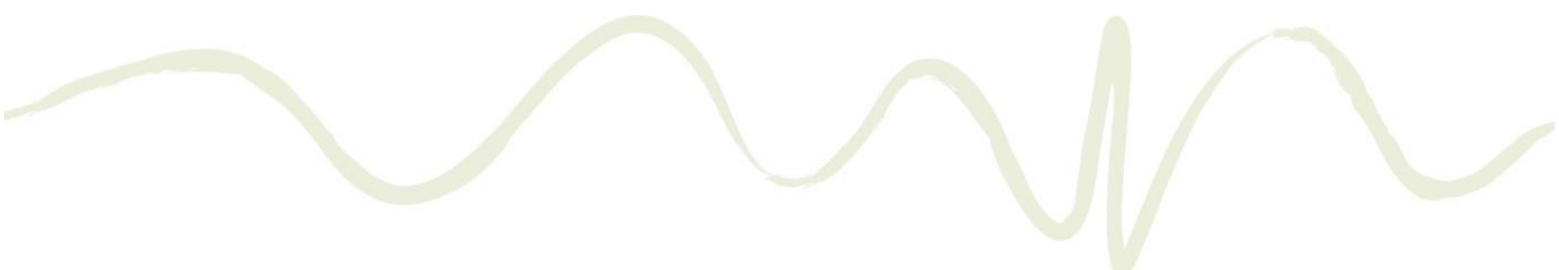
In terms of access to the Project Site, it must be recognised that every flood event is different in terms of magnitude, duration and location of impact. The flood modelling prepared for the Tweed River considers particular 'design' rainfall events prepared in accordance with accepted processes.

A key driver for the location of the new hospital, is equitable access for the entire population of the Tweed Byron Region. TTH is located at the far north of the Tweed LGA, which does not provide equitable access for the Tweed-Byron population. Despite being readily accessible to the residents of Tweed Heads, any residents attending from within the southern part of the catchment area have considerable travel distances in order to attend their major referral hospital. The location of TTH at the far northern end of the catchment also maximises the distance for hospital transfers from Byron Central Hospital and Murwillumbah District Hospital.

Flooding is a key risk across the Tweed Valley region and ensuring that the major population centres retain access to acute hospital services under 5% and 1% Annual Exceedance Probability (also referred to as Q20 and Q100) flooding events are important considerations. TTH sits approximately two to three metres below the Probably Maximum Flood (PMF) level. Retention of access to TTH during a major flooding event is a key issue for TTH, as was demonstrated during the 2017 floods, during which the existing and growing population centres to the south of Tweed River became cut off from access to the full range of acute hospital services, as did some of the residents of Tweed Heads.

This emphasises the need to consider equitable access arrangements, and the advantages of a more central location for the Tweed Valley Hospital in relation to the broader Tweed-Byron region. The Project Site and its immediate access roads are above the PMF, with good street frontage and various access points. There is alternative road access for the southern coastal population when the M1 and Tweed Coast Road are impacted by flooding.

Robina Hospital presents a viable option for residents north of the Tweed River to access a similar level of hospital if they are cut off from the Tweed Valley Hospital. In this regard, Section 2.4 of the EIS



Appendix W provides a description of expected access to the site during a 5% (i.e. 1 in 20 year ARI event) and 1% AEP (1 in 100 year ARI event) regional flood event.

It is agreed that due to flooding during a 5% AEP event (and above), that sections of the M1 and roads in Chinderah will likely be inaccessible limiting or preventing access from the north to the Project site. Our current advice is that road access to the south will be possible in events up to the 1% AEP, although this is based on consideration of a particular regional design flood event.

It is worth considering that no site assessed during the feasibility assessment phase was found to provide unimpacted flood time access to the serviced population areas during a 5% AEP event or above.

The proponent has the responsibility to ensure that public bus routes are in place to service the community.

Public transport was reviewed and assessed as part of the Traffic Impact Assessment. Cudgen Road and Turnock Street are part of an existing public transport route which includes two public bus services. The SSDA includes upgrades to existing facilities (i.e. the two existing bus stops on Cudgen Road), improving the safety and efficiency of bus operations on the site frontage.

TfNSW, in coordination with the bus operator (Surfside), are in the process of a service planning review. It is noted that this review is being conducted as ongoing service improvement investigations across the shire (i.e. regardless of the Project). Consultation has been held with TfNSW and Surfside and will be ongoing to ensure appropriate public transport provisions are in place to support the Tweed Valley Hospital.

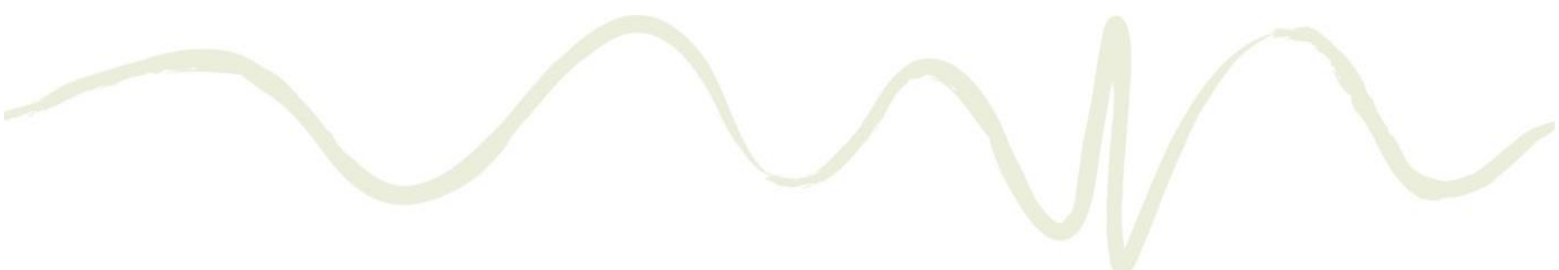
Access for community and aged care transport vehicles has been catered for within the site geometry. Strategies for relocating existing community and aged car transport from TTH to the Tweed Valley Hospital as well as provision of new services will be investigated as part of Stage 2.

The Transport, Access and Parking Working Group has recently been established which will investigate access and transport operations as part of Stage 2.

The EIS notes different numbers of staff numbers within the SEIA and the TIA.

The traffic assessment and traffic generation refer to 1,050 staff "ASDS" which refers to average staff per weekday shift. This was based on project yields and benchmarking. These staff numbers may not necessarily reflect total staff employed (FTE or full-time equivalents) and rather refers to the number of staff likely to be on-site at a given point in time during a typical weekday shift. The number of FTE's may be higher, noting that not all staff are on-site at the same time or working the same shift.

The EIS does not outline what steps will be taken to alleviate the increased traffic load on Cudgen Road. The number of proposed parking bays is viewed as insufficient.



The traffic impact assessment reviewed the impacts of increased traffic as a result of the Project and provided mitigation measures where operational thresholds on the existing network were identified to be exceeded.

The Transport, Access and Parking Working Group has recently been established which will investigate access and transport operations as part of Stage 2. This includes reviewing car parking demand and proposed on-site car parking and operations.

Local agricultural businesses may be impacted by increased traffic on Cudgen Road. The proponent has an obligation to identify how this will be mitigated.

The traffic impact assessment reviewed the impacts of increased traffic as a result of the Project and provided mitigation measures where operational thresholds on the existing network were identified to be exceeded.

3.10.4.2 *General Economic Impacts*

The SEIA does not investigate and report on the negative indirect economic impacts of the loss of farmland and agricultural jobs on the Cudgen Plateau. Supply chain jobs connected to farms, as well as hospitality and tourism jobs may be impacted due to hospital caused parking shortages in Kingscliff.

The suggested negative wider economic impact (indirect) has been modelled. Agriculture is a primary industry and so the flow on impacts are not as great (not as many dependencies in the economic chain) as secondary and tertiary industries.

Supply chain jobs are considered in the assessment of wider economic impacts

No significant impact is considered with regards to hospitality and tourism jobs as the SEIA and social and economic response to submissions has established that the hospital development is unlikely to substantially reduce the tourism viability of Kingscliff provided appropriate mitigation measures are in place. Refer to Section 3.8.4 in relation to parking mitigation.

The construction jobs generated would occur regardless of the site chosen.

This is acknowledged. The economic impact modelling assumes growth in construction-related jobs during the construction process on a hospital the size of TVH on a greenfield site.



3.10.5 Site Considerations

3.10.5.1 *Historical Use*

The site has a historical use for farming. The rezoning would curtail this culturally valued use. This will also impact the growing agricultural tourism industry. The heritage assessment report should be revisited to include physical materials and archives. No community consultation was undertaken with regards to historical significance or knowledge.

The Historical Heritage Assessment was prepared in accordance with standard and current guidelines for heritage assessment in NSW. This required the historical context of the site to be addressed via review of regional and local historical contexts and consideration of the specific land use history of the site including its prior historical use for farming. The review further included consideration of the local thematic history for the Tweed Shire area (prepared for Tweed Shire Council), relevant historical maps and plans of the area and site, and other available historical information to develop an understanding of historical use and development.

3.10.6 Consultation

Concerned residents have been unable to genuinely participate in the site selection, while residents of Tweed have not been able to influence the loss of the Hospital from their locality.

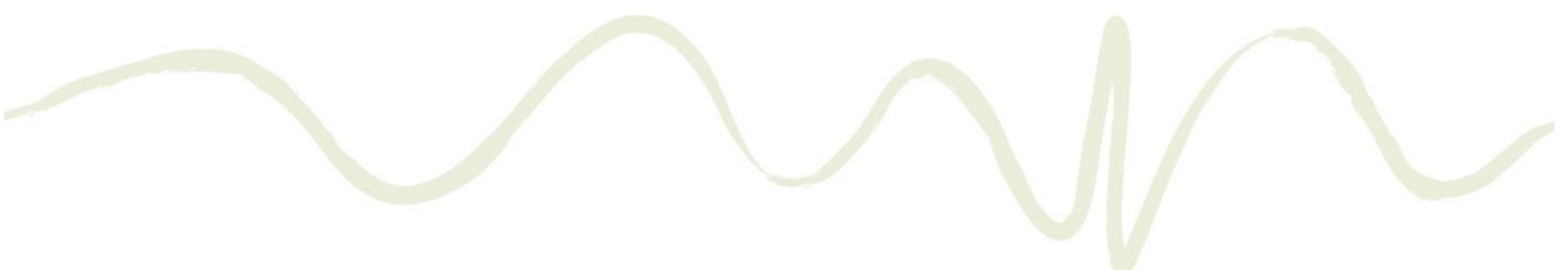
The Strategic Planning Framework that allows for SSF to be rezoned for use as Public Infrastructure is discussed and justified in Section 3.3.2.1 of this report.

The site-specific SEPP is being administered by DPE as a separate planning process to the SSDA. Submissions in relation to the SEPP will be addressed by DPE as part of that process.

Significant opportunity has been provided for community involvement in the process. Since April 2018, consultation on the project has included more than 42 pop-up sessions across the Tweed-Byron region, eight project drop in sessions, online surveys, two community forums, seven Community Reference Panel meetings (60+ members); and over 10,000 visitors to the project website. Through the site selection process over 600 written submissions were received. Staff and health experts have been regularly engaged through 21 staff forums, 130 project user group meetings and other workshops to date. Consultation has included a wide geographic involvement in the region, across age profiles, including those 60 years and older.

3.11 SEAR 10 – Aboriginal Heritage and Historical Heritage

No public submissions were received specific to SEAR 10 that relates solely to Aboriginal Heritage. However, submissions were received regarding Historical (non-Aboriginal) Heritage. Note there were no SEARs related to Historical (non-Aboriginal) Heritage, however the EIS (Sections 5.24 and Appendix O) provided a comprehensive assessment of Historical (non-Aboriginal) Heritage, supported by the Historical Heritage Assessment (HHA) prepared by Niche. Historical heritage responses have



been included in the following sections for the purpose of addressing submissions that raised such heritage matters.

3.11.1 Farming History

The Historical Heritage Assessment should consider the farming history of the area, including consultation on the issue of the site being designated for State Significant Farmland. The methodology followed is questioned, as no physical materials or archives were undertaken.

The Historical Heritage Assessment was prepared in accordance with standard and current guidelines for heritage assessment in NSW. This required the historical context of the site to be addressed via review of regional and local historical contexts and consideration of the specific land use history of the site including its prior historical use for farming. The review further included consideration of the local thematic history for the Tweed Shire area (prepared for Tweed Shire Council), relevant historical maps and plans of the area and site, and other available historical information to develop an understanding of historical use and development.

Health Infrastructure has committed to undertaking recording, stabilisation and possible reconstruction of remaining wall sections as a conservation initiative for the site and for future generations. This process would include engagement with ASSI and wider community representatives to inform the recording tasks, stabilisation requirements, and site interpretation design.

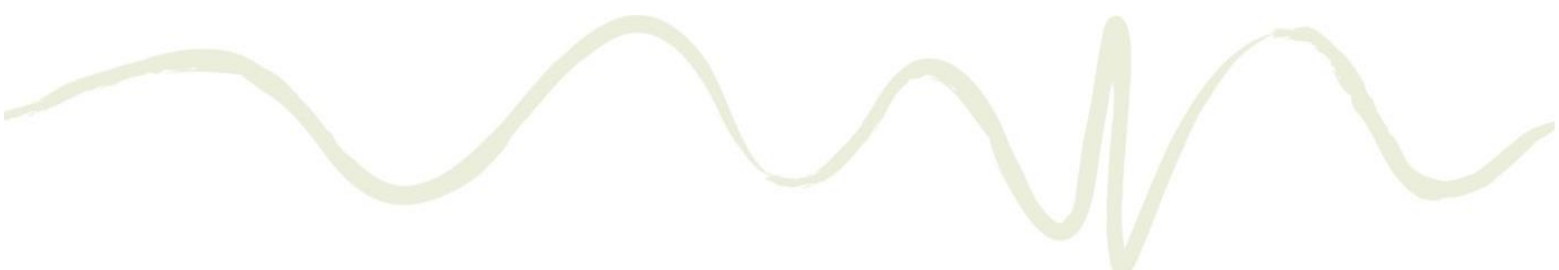
It is noted that there are no heritage items listed on the NSW Heritage Register on or close to the Project Site of the hospital.

As addressed in Section 6 and **Appendix H**, an assessment has been provided with regard to a local heritage item (Cudgen Sugar Mill Remains listed as item A2 on the TLEP 2014 Schedule 5) that occurs adjacent to the intersection of Tweed Coast Road and Cudgen Road. This has been done in the context of the upgrade recommended by the TIA for this intersection. This assessment concludes that the proposed works would have no direct physical impact on the archaeological values of the Cudgen Sugar Mill Remains.

3.11.2 South Sea Islander Heritage

The Historical Heritage Assessment lists that the South Sea Islander communities have significant ties to land at Cudgen, however no consultation was undertaken with South Sea Islander communities. It is noted that the *Environmental Planning and Assessment Act 1979* requires the facilitation of items, places, buildings, works, relics, moveable objects or precincts of environmental heritage significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item, area, object or place, identified in a study of the environmental heritage of the area.

The Historical Heritage Assessment was prepared in accordance with standard and current guidelines for heritage assessment in NSW. The conclusions of the Historical Heritage Assessment found the Project to be reasonably sympathetic and acceptable. The recommendations made in the Historical Heritage Assessment reflect the need for further management of the items identified including the



involvement and engagement with the community on interpretation, recording and stabilization of the applicable walls identified within the Project site.

For historic heritage, the Office of Environment and Heritage requirements state “c. include a statement of heritage impact for all heritage items (including a significance assessment)”. If there has not been any consultation with the ASSI community or the occupants, and if the site has not been completely inspected either on the ground or through aerial photos, then this requirement has not been met.

The Historical Heritage Assessment was prepared in accordance with standard and current guidelines for heritage assessment in NSW. The assessment included consideration of the significance of the items identified within the Project Site. The review further included consideration of the local thematic history for the Tweed Shire area (prepared for Tweed Shire Council), relevant historical maps and plans of the area and site, and other available historical information to develop an understanding of historical use and development. This process includes consideration of impacts and work with project designers to minimise impacts where feasible and where required recommended appropriate mitigation actions.

3.12 SEAR 11 – Noise and Vibration

3.12.1 Noise and Amenity Impacts

A thorough noise assessment must be undertaken using detailed design information, including existing background noise assessment

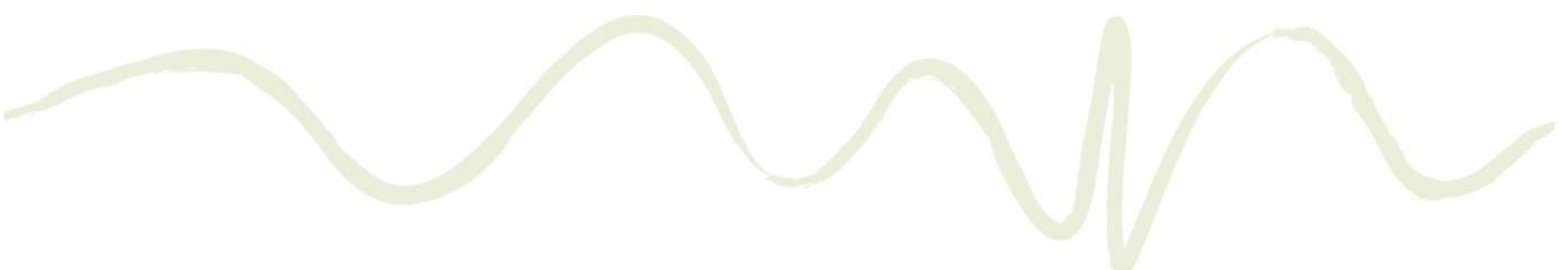
A thorough noise assessment, supported by adequate background noise monitoring, and in accordance with relevant guidelines was undertaken (refer Appendix P of EIS). The detailed noise assessment informed by detailed design will be undertaken as part of the Stage 2 EIS assessment.

3.12.2 Aviation Noise

The hospital will result in increased helicopter flights in and out of the hospital, up to two to three per day. This will result in noise impacts for surrounding residents and wider Kingscliff, the coastal strip and farmlands, particularly at night time. While the hospital is not intended to be a trauma hospital, it cannot be foreseen that trauma victims would bypass the new facility.

As is noted in the objection summary, it is not planned that TVH be a trauma hospital. Tweed Valley Hospital is a Level 5 Regional Referral Hospital. As outlined in the introductory discussion on Understanding the Clinical Services Planning Hierarchy, TVH is not a tertiary facility, and will not deliver Level 6 trauma services as provided by Gold Coast University Hospital (GCUH).

Most helicopter movements will be pre-planned transfers of in-patients to higher level hospitals and these will occur mostly during daytime working hours. Inwards movements at night will be rare. Total



numbers of movements at The Tweed Hospital currently averages 2 per week, there is expected to only be a slight increase on these numbers. Any notion that TVH will have two to three movements per day is misplaced. That level of activity is only experienced by the “busiest” helicopter-capable hospital in the State of NSW (John Hunter Hospital).

The siting of the HLS within the TVH campus and recommended approach and departure flight paths have been selected with the concerns of residents in mind – avoiding overflying residential areas to the maximum extent possible. Local people closer to the hospital will notice the noise but the overall impact will be less per helicopter movement than is currently experienced by people close to TTH because the TVH HLS will be elevated while the existing HLS is ground level. Helicopter movements will be occasional at worst and the notion that the helicopters operating to and from the HLS at TVH will cause a “severe disturbance” is uninformed.

3.12.3 CEMP Comments

The rock removal impacts of earthworks associated with the Stage 1 impacts need to be considered in full.

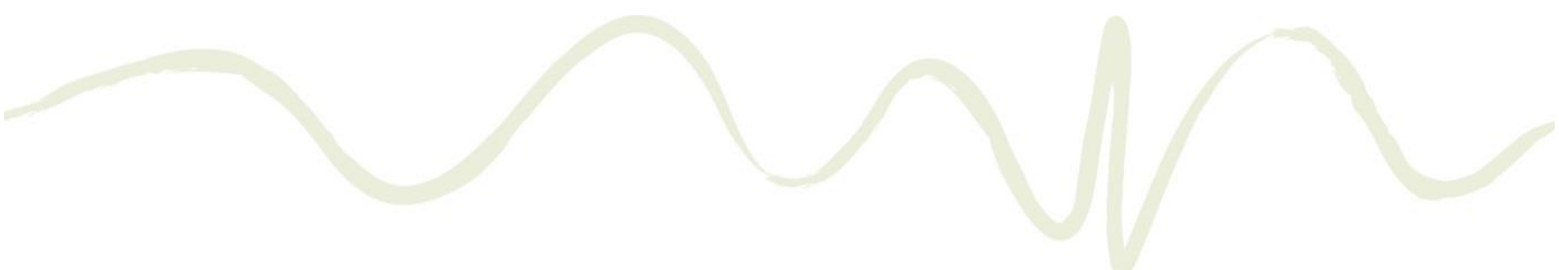
Additional geotechnical investigations have been carried out on-site to better understand the geological profile of the site. The investigations confirmed that the site profile is highly varied with intermittent bands of shale rock. The quantity of rock being excavated is much less than assumed following the initial investigation. As a result, blasting is not recommended as a form of excavation of rock and is not proposed to occur at any time during the construction process.

The type and size of rock crushers are yet to be determined. The rock on-site varies significantly depending on the relative location, from very weather rock to fresh high strength rock. This, in addition to finalising the subgrade levels (RL's) make it difficult to predict the quantity of rock to be crushed. The management plan will include:

- Irrespective of the size and numbers, rock crushers will have a water attachment for dust suppression at the source. The water is sprayed at the face of the crusher before, during and after the crushing.
- Crushers will be located as far as practicable from Cudgen Road and immediate neighbours (i.e., on the north-west area of the site).
- All crushed rock suitable for re-use will be recycled on-site as fill, sediment control, pavements, hardstands, construction exits and pipe bedding materials.
- Where possible, the oversize material from hard rock projects is also reused for vehicle entry shake downs and erosion control.

If Bulk Excavations are intended to be included in the stage 1 approval, specific actions and measures are needed to be detailed not the generic motherhood statements as shown highlighted.

Stage 1 includes bulk earthworks to establish the required site levels and create a stable landform by recycling the excavated material in preparation for hospital construction.



The bulk earthworks for the Stage 1 works of the project and associated infrastructure are detailed on Drawing No. C011, C020, C021, C022 and C023. These drawings have been updated as part of the Response to Submissions and are provided at **Appendix B**.

3.13 SEAR 12 – Contamination

3.13.1 Agricultural Contamination

Testing of the agricultural waste site associated with historical farming uses (sugar plantation) is required.

While some areas were not accessible, two targeted sampling locations were completed within the area of the farm dump during the detailed site investigation (these locations reported no concentrations of potential contaminants above guidelines) and given the size of the farm dump, two targeted samples are considered adequate to characterise the soil in this area. A suitably qualified environmental consultant will be on-site during removal of the farm dump to ensure remaining materials in the dump are inert waste. Additional soil sampling has occurred as part of preliminary works, and the results can be found at **Appendix F**. No additional soil testing in the area is considered to be required unless potentially contaminating material is identified once vegetation is cleared.

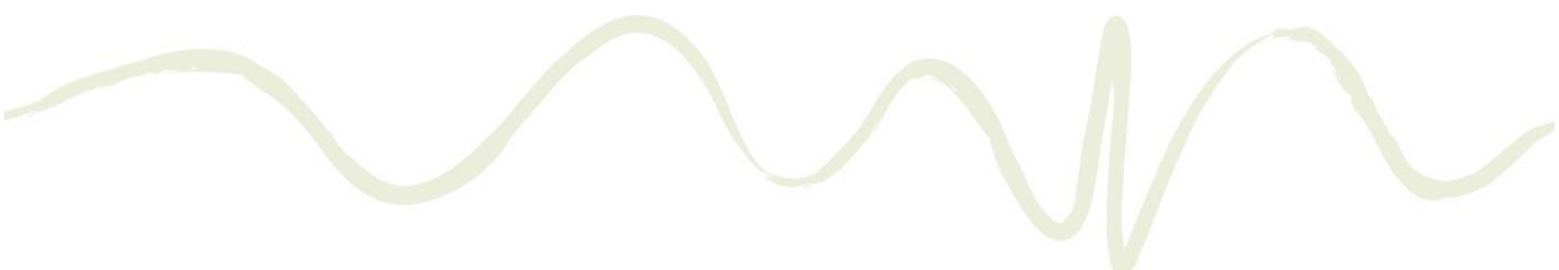
It was confirmed that sampling undertaken was based on the NSW EPA contaminated land guidelines for Assessing Former Orchards and Market Gardens, Guidelines for Assessing Banana Plantations, and Sampling Design Guidelines. It is noted that samples analysed were composite samples (each analysed sample consisted of four subsamples) so sampling density across the Stage 1 development footprint was 16 locations per hectare. A reduced sampling density was considered appropriate to characterise areas outside the Stage 1 development footprint. Proposed sampling densities were provided in a SAQP and approved by an independent Certified Contaminated Land Specialist prior to sampling works undertaken. A site audit report is to be provided to DPE, with interim audit advice included at **Appendix F**.

There is existing contamination on-site that requires assessment and remediation.

A preliminary and detailed site contamination report has been prepared, and is attached at **Appendix F**.

A summary of information gathered during the desktop investigation and initial site inspection is summarised below:

- Property owners indicated that they had owned the site since 2010, and site had been used for small scale farming of predominantly sweet potatoes during that time. No stock animals have been on-site during the time of current ownership.
- Property owners indicated there was no record available of historical chemical/fertilizer use on-site.
- A small farm dump was located on the edge of the vegetated area in the northwest corner of the site. A visual inspection of the dump identified only inert building materials such as fencing posts,

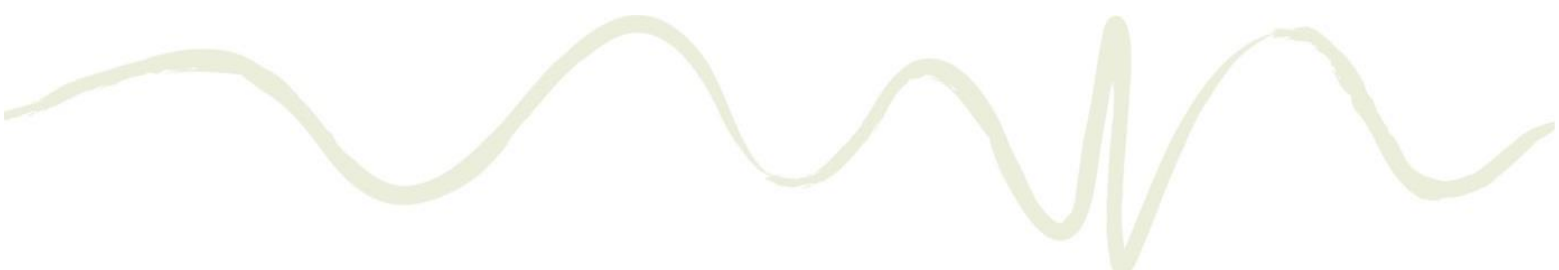


and paving bricks, however due to extensive coverage by vegetation the full extent of the dump could not be clearly determined.

- No ground staining to suggest potential soil contamination was identified on-site.
- Asbestos guttering in poor condition was noted along the western side of the site shed, with isolated fragments of ACM (Asbestos containing material) noted adjacent to the northwest corner of the shed.
- Chemical storage on-site was limited to 10L and 20L containers of pesticides/herbicides (Dimethoate, Serenade Prime and Banjo) and motor oil and bags of fertiliser.
- Above ground diesel storage tank (approx. 1000L) was noted adjacent to farm shed, tank appeared in reasonable condition.
- A farm dam was identified on the edge of the vegetated area in the northern portion of the site, it was noted that the pump associated with the storage dam was connected to mains power.
- A paddock of custard apple trees was identified in the north east corner of the property.

Six composite samples and one surface sample were collected during the initial preliminary site inspection and a total of 55 primary soil samples, and six QC samples (three duplicate and three triplicate) were analysed from 50 sample locations completed across the site from 1 August 2018 to 3 August 2018. Samples were selectively analysed for the Chemicals of Potential Concern (COPC) identified (Total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAHs), heavy metals, volatile organic compounds (VOCs), asbestos and organochlorine/organophosphorous (OC/OP) pesticides). A summary of analytical results is presented below:

- Asbestos Fibres (AF) and Fibrous Asbestos (FA) was detected at concentrations exceeding the residential guideline levels in sample HA1-0.1 collected from adjacent to the western side of the shed on-site.
- No heavy metals (Arsenic, Chromium, cadmium, copper, nickel, zinc, lead or mercury) were detected in any of the soil samples at concentrations exceeding the nominated health-based investigation levels.
- Sample HA4-0.15 reported zinc concentrations exceeding the ecological investigation levels for residential land use and ecologically sensitive areas.
- Sample HA2-0.15 reported zinc concentrations exceeding the ecological investigation levels for ecologically sensitive areas.
- Composite sample HA17 reported zinc concentrations exceeding the adjusted ecological investigation levels (EILs) for ecologically sensitive areas.
- Analysis for zinc of the individual discrete samples used for the HA17 composite (HA17-1, HA17-2, HA17-3 and HA17-4) did not report any concentrations of zinc above the EIL guidelines.
- No heavy metals were detected in any of the other soil samples analysed at concentrations exceeding the Ecological investigation levels for residential land use.
- No TRH, BTEX or VOC compounds were detected in the soil samples submitted for analysis.
- None of the soil samples analysed reported OC or OP pesticide concentrations in excess of the nominated human health or ecological guideline levels.
- As part of the investigation a groundwater sample was collected from the groundwater well installed as part of the geotechnical investigation at the site and water and sediment samples were collected from the on-site surface water storage dam.
- Copper concentration in the groundwater sample collected from groundwater well GW1 and surface water sample WS01 exceeded the Groundwater Investigation Level (GIL) for freshwater, and ANZAST, 2018 Freshwater 99 percent species protection Guidelines.
- Nickel in surface water sample WS01 exceeded the ANZAST 2018 Guidelines.
- Zinc concentrations in both the groundwater sample and two surface water samples from the storage dam on-site exceeded the freshwater GIL, and ANZAST. 2018 Guidelines.

- 
- Sediment sample SED01 reported copper and nickel concentrations exceeding the low sediment quality guidelines (SQG) but below the high-SQG. The copper and nickel concentrations detected were comparable to the surface soil concentrations across the cultivated area of the site and are not considered indicative of any significant contamination in the dam sediments.

Based on the scope of works carried out, the objectives outlined above and subject to the limitations set out in this report the following conclusions are made:

- No exceedances of relevant human health investigation levels for chemical contaminants were identified in the soil samples analysed. Exceedances of ecological assessment criteria are relatively minor and isolated, and the site is considered acceptable for use in the Project, from a chemical contamination perspective.
- ACM was identified in the area around the western side of the chemical storage/equipment shed, Soil results indicate Asbestos fines in the soil and the ACM identified on the surface was moderately degraded presenting a risk to human health if disturbed.
- Anthropogenic wastes were noted in a small farm dump in the north western corner of the site. Visual assessment and soil analytical testing indicate the material in this area is inert waste, however some portions of the dump could not be assessed during the PSI/DSI due to vegetation overgrowth.
- The works undertaken at the site have sufficiently characterised the site to enable assessment as suitable for the SSDA subject to implementation of a Remediation Action Plan as recommended below.

Based on the investigations carried out and our current understanding of the Project, the following is recommended:

- A Remediation Action Plan (RAP) be developed for the area of asbestos impacted soil on the western side of the main site shed. The RAP should be prepared in accordance with SEPP 55 and relevant NSW guidelines and legislation and include appropriate protocols for removal and appropriate disposal of all remaining ACM associated with the main shed.

3.14 SEAR 13 – Utilities

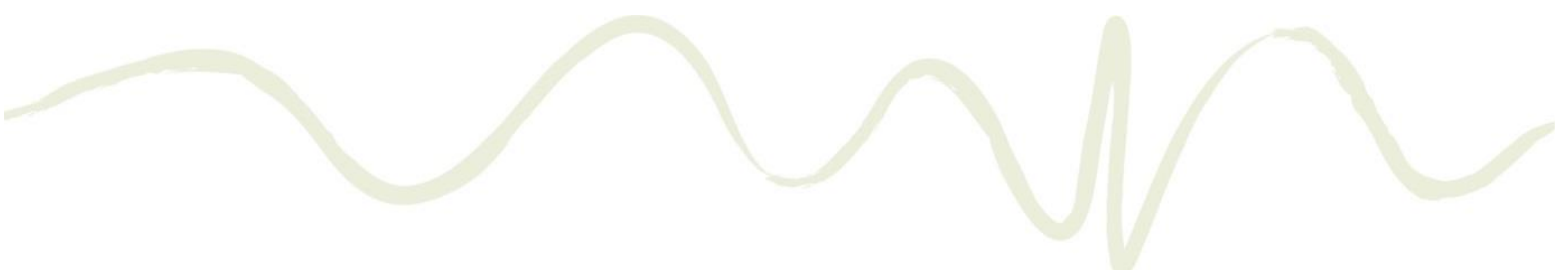
3.14.1 Availability of Infrastructure

The infrastructure management plan does not adequately assess water supply, waste water treatment, sewer, fire-fighting or water supply.

Health Infrastructure's advisors have reviewed the condition, capacity, compliance, reliability and efficiency of the existing supply authorities and hospital infrastructure against the existing demands, the proposed demands and the overall vision and Concept Proposal of the Tweed Valley Hospital. These studies found that the hospital can be adequately serviced. Refer to Infrastructure Management Plan at Appendix T and U of the EIS.

It is the Council's responsibility to provide assessment, based on master planning and feasibility information of the proposed project provided by the applicant.

The Council have assessed the existing Council water and sewer infrastructure with regard to the proposed new hospital loads.



Council advice was provided during the normal and required consultation process including face to face meetings and email correspondence.

Proposed new hospital supply loads, provided to Council, are in accordance with NSW Water Directorate loading calculation methods.

The Council currently has not advised any concerns regarding the Project Site being serviced by existing council infrastructure.

Final Section 68 applications and approvals are completed during the Stage 2 design development phase.

The availability of services during a PMF event, cited as determining factor in the site selection process, is questioned.

Continuity of services during a natural disaster is critical to the delivery of health services. OEH in their submission confirms that overall, the site is considered to be very satisfactory from a flood perspective as the operational portion of the hospital site is located above the PMF level as it meets the objectives and criteria of the NSW Floodplain Development Manual. There is also more than adequate freeboard so that future increases due to climate change will not impact the operational areas of the complex. Although the access to the north is flood affected, this is an issue that would be present for any development site chosen and the hospital will have access to a network of unaffected roads to the south. Flood matters were addressed in Section 5.17 of the EIS. Services and utilities have been addressed in Section 5.13 of the EIS and it has been determined that the Project can be adequately serviced.

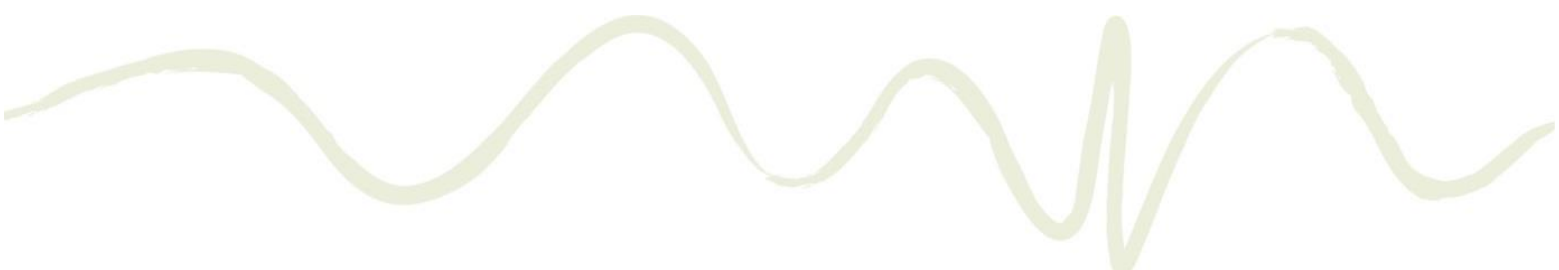
The SEAR directly requests information regarding the life of the project. This has not been included.

The condition, capacity, compliance, reliability and efficiency of the existing supply authorities and hospital infrastructure against the existing demands, the proposed demands and the overall vision and Concept Proposal of the Tweed Valley Hospital have been assessed in the EIS and supporting Infrastructure Management Plans. Although more specific detail and further assessment would be provided at Stage 2, informed by detailed design, an adequate level of assessment of the Project as a whole in the context of the Concept Proposal has been provided and was assessed in Section 5.13 of the EIS.

The inclusion of the Stage 1 Early and Enabling Works in the SSDA is consistent with the provisions of the EP&A Act. Section 4.22 of the EP&A Act states that:

(1) For the purposes of this Act, a concept development application is a development application that sets out concept proposals for the development of a site, and for which detailed proposals for the site or for separate parts of the site are to be the subject of a subsequent development application or applications.

(2) In the case of a staged development, the application may set out detailed proposals for the first stage of development.



The inclusion of the Stage 1 Early and Enabling Works within the SSDA is a legitimate practice that is consistently used for other developments including but not limited to hospitals, allowing for the staged evaluation of applications, with the consideration of the overall Concept Proposal provided upfront and further detailed assessment provided in subsequent/applicable stages.

3.14.2 Water Supply and Management

The availability of adequate and secured water supply is questioned, noting the cumulative impacts of development in the area.

It is the Tweed Shire Council's responsibility to determine future planning growth and infrastructure upgrades, based on master planning and feasibility information of the proposed project provide by the applicant.

The Council has determined the water supply infrastructure system to be adequate and approved connection, based on applications by the applicant to Council and normal the consultation process including face to face meetings and email correspondence.

Proposed new hospital water supply loads, provided to Council, are in accordance with NSW Water Directorate loading calculation methods.

The water flow and pressure testing at Elrond Drive is questioned, noting that downstream pressure should be considered and pressure loss through the internal pipework in accordance with AS3500.1.

As per statutory requirements Health Infrastructure's advisors have made application to the Tweed Shire Council for written confirmation of available water supply pressure and flows.

The flow and pressure results are based on actual field tests conducted on 13 July 2018.

The flow and pressure will be adequate for the development, as water storage tanks and pumps will supplement any potential shortfall during peak times.

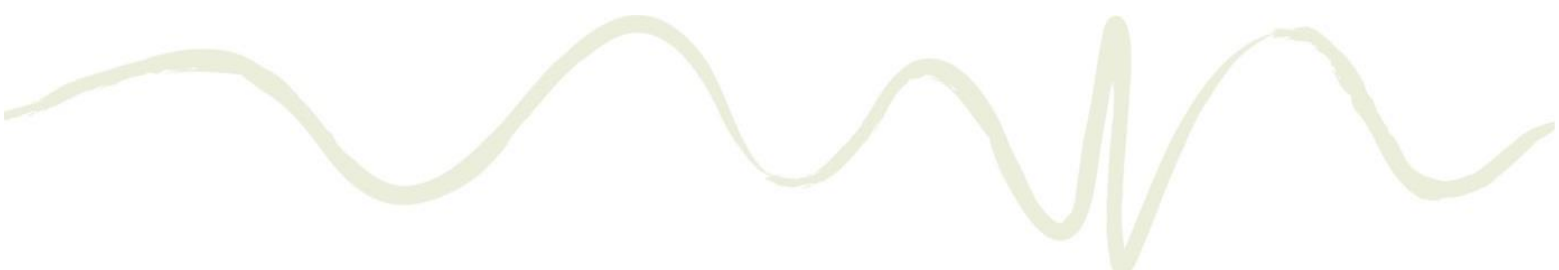
Once the water supply connection has been made, ongoing water flow and pressure monitoring will be performed during Stage 2 Design Development stage to confirm water storage volumes.

It is questioned how water storage tanks will be protected from contamination from herbicide and pesticides associated with nearby farming.

Water tanks will be sealed against airborne contaminants in accordance with AS35500 requirements AS/NZS2500.1-2015 Section 8.3 Water Storage Tanks Design and Installation Requirements.

Clause 8.3.1 General :

(f) "Every tank shall be provided with a cover that is designed to prevent entry of dust, roof water, surface water, ground water or animal life"



The availability of water for firefighting is questioned.

The Council water supply infrastructure is adequate for connection for domestic and firefighting purposes. Water supply will be supplemented with storage tanks and pumping equipment to meet statutory codes, and best practice in firefighting.

3.14.3 Wastewater Treatment

There has been no assessment of the current and future non-hospital sewer loadings for the life of the project, and insufficient assessment of existing sewer infrastructure to determine whether it is possible to connect into the existing sewer system. It is suggested that a full network assessment including an upstream assessment of wet well, pump and rising main capacity and a downstream assessment of dry and wet weather flows, pipe capacities and system volumes is necessary to demonstrate that connection into the existing system is possible.

It is Tweed Shire Council responsibility to provide assessment of current and future non-hospital sewer loadings. Feasibility assessments based on future hospital load data have been provided to Council.

The Council currently has not advised any issues in relation to the site being serviced by existing Council infrastructure.

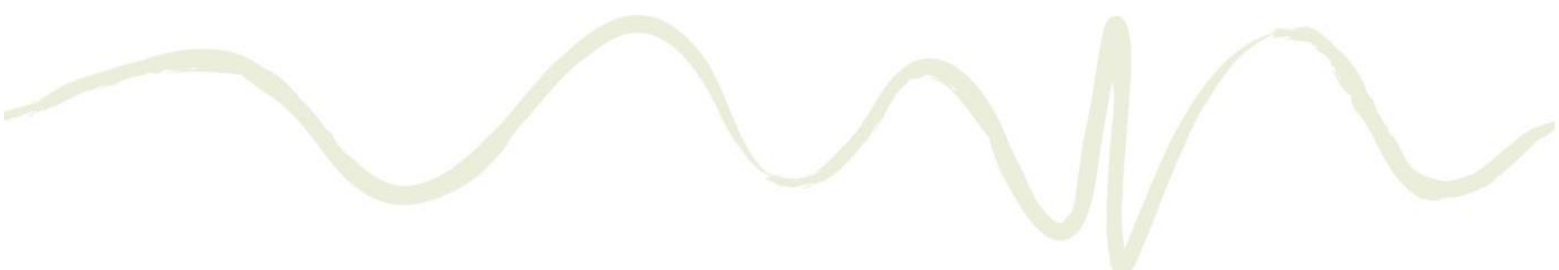
Council have confirmed the feasibility of the service connection for master planning/ feasibility purposes. Initial advice from Council indicated that sewer main connection would most likely occur at Tweed Coast Road, however subsequent advice was received after a flow calculation of a maximum 35 l/sec was provided. Council advised connection to the Cudgen Road sewer rising main system is possible.

Final details of sewage pump station and rising mains would be subject to normal Section 68 applications for approval prior to construction. The final detailing and applications for approval would be performed during the Stage 2 works design development stage.

There has been no assessment of the condition of existing Council water and sewer infrastructure, and whether it is capable of accommodating the hospital development for the life of the project.

Tweed Shire Council has provided assessment of condition/ reliability of existing water and sewer infrastructure via face to face meetings and noted in minutes that the services are in good condition with no reports of major failures. Section 2 of the Infrastructure Management Plan in Appendix U of the EIS provides details of this engagement.

Assessment was based on the assessment of current loads, future council planning expansion areas and concurrent development projects.



The existing 300 mm water main is considered a reliable supply for the hospital as it is classified as a grade 2 supply.

Subsequent to lodgement of the original EIS submission, liaison with Tweed Shire Council engineers has and will be ongoing.

Final determination and approval for construction will be received after Section 68 application to carry water supply. Approval will not be granted by Council until Planning Approval is achieved.

It is noted that sewer main surcharge or blockages will discharge via an overflow relief gully. It is questioned how this this will work, and how impacts on the adjacent environment area will be managed.

This is standard engineering practice to meet the requirements of AS3500. The final detail design will be designed to meet AS3500 and provided to Tweed Shire Council for approval prior to construction.

It is questioned whether sewerage load calculations include visitors and staff.

Proposed new hospital sewer loads provided to Council are based on NSW Water Directorate loading calculation methods which are based on historical data for healthcare facilities and are total loads including staff, visitors and patients.

3.14.4 Liquid Trade Waste

The application does not provide Liquid Trade Waste composition or quantities, which are required to determined and mitigate environmental impacts.

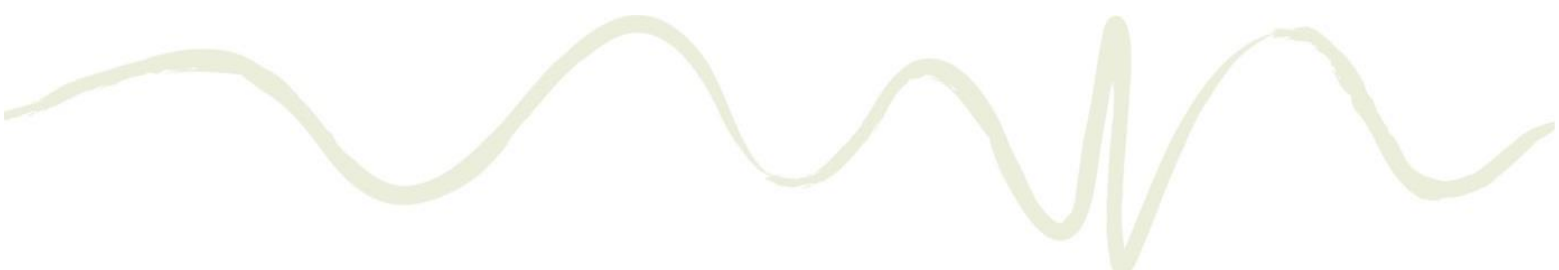
The Integrated Water Management Report Revision 06 Section 4.1.1 submitted as (Appendix T of the EIS) reads in part:

“Designated hydraulic trade waste (Laboratories, commercial kitchens and alike) will be pre-treated in accordance with AS3500.2 2015, Tweed Shire Council requirements and industry best practice and will discharge directly to internal house sewer reticulation system.

Typically the following pre-treatment systems will include:-

- a. Grease arrestors will be required for the commercial kitchen and any food retail café etc.
- b. Cancer treatment methods to be determined, in particular treatment of thyroid cancer utilising Iodine 131.
- c. Dilution pit(s) for pathology and other hospital laboratories.
- d. Cooling pit(s) for high temperature discharge such as CSSD, RO plant disinfection equipment, steam boilers etc.

Final determination of liquid trade waste management systems will be based on final schedules of accommodation and models of care.



It is envisaged that the current trade waste agreement for the TTH site will be transferred and modified for the Project Site upon completion of Stage 2 works.

Further, email correspondence dated 22 October 2018, from Tweed Shire Council notes that both Murwillumbah District Hospital and TTH have liquid trade waste agreements which are specific to each site. If there will be liquid trade waste discharge from the proposed hospital the conditions would be specific to the activities performed at that site. These would be assessed when the application and hydraulic plans are submitted to Council. The final details will be confirmed during the Stage 2 design development works as part of normal industry best practice.

3.14.5 Septic Tank Locations

Submissions note that the application does not assess the location of existing septic tanks and disposal trenches, and the future intention regarding decommissioning or otherwise.

These works were determined to be included within the Preliminary Works, that are Exempt and Complying Development.

These works comprise of:

- Site establishment including fencing of site
- Set-up temporary accommodation and amenities to service the Preliminary works
- Temporary construction car parking
- Temporary stormwater drainage (for site compound)
- Temporary site electricity supply
- Demolition of existing on-site buildings and structures including remediation of contaminated land.

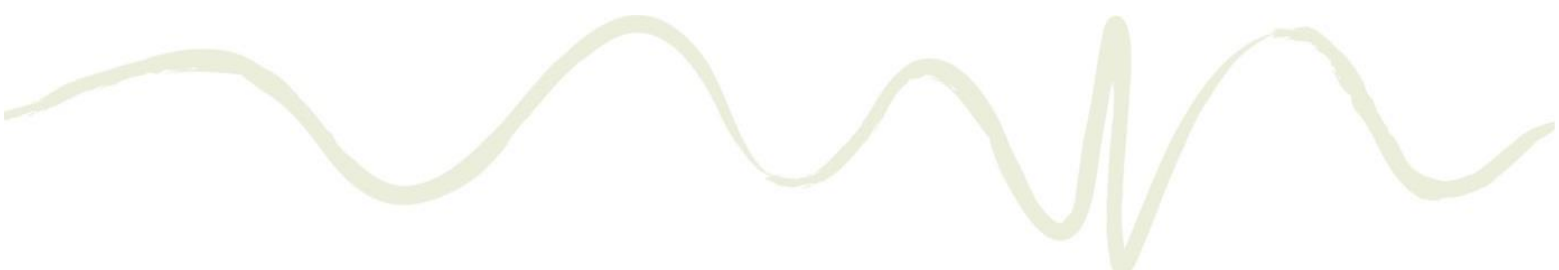
The septic tank on-site has been cleaned, decommissioned and demolished.

3.15 SEAR 14 - Water and Soils

3.15.1 CEMP Comments

As the detailed design has not been completed, it is expected that permanent structures are not included in the referenced Bonacci Reports supporting works proposed for the early and enabling stage 1 works.

To control the existing sediment runoff resulting from the former agricultural use, four basins are being constructed as part of preliminary works (not part of this application). These sediment basins will function as sedimentation basins prior to Stage 1 works and will be augmented by the construction of a fifth sedimentation basin and associated infrastructure during Stage 1 works. At the completion of Stage 2 (construction of the hospital building and associated infrastructure, not part of this application), the four basins will be converted to bioretention/on-site detention basins and augmented where needed.



The EIS notes that the works would be undertaken in accordance with the stormwater assessment and Soil and Water Management Plan prepared by Bonacci as part of the Civil and Structural Design Report and Water Sources Assessment. As the detailed design is not complete, this Soil and Water Management Plan must only be relevant to the existing land formation, and not for bulk excavation or foundation works (which should be part of the Stage 2 application by the Proponent).

Bulk excavation and piling are part of the Stage 1 works. Management plans apply to these works.

3.16 SEAR 15 – Contributions

No submissions were received relating to SEAR 15 – Contributions.

3.17 SEAR 16 – Drainage

No submissions were received relating to SEAR 16 – Drainage.

3.18 SEAR 17 – Flooding and Coastal Hazards

3.18.1 Extent of Assessment

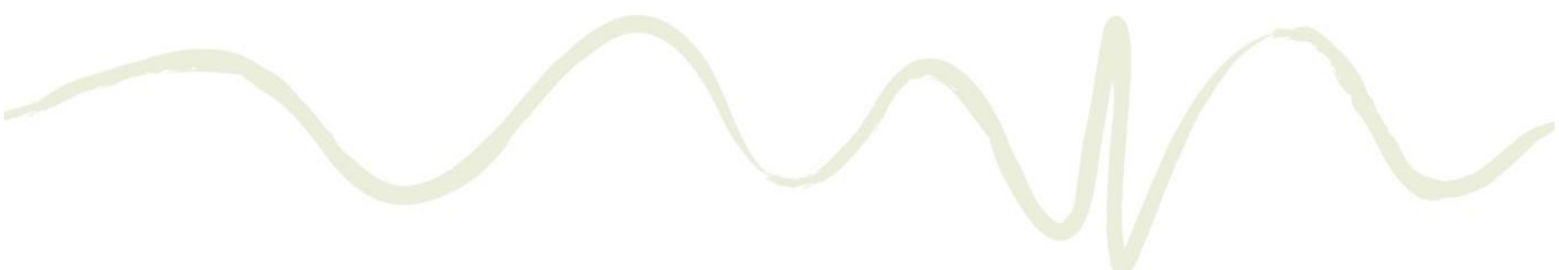
The extent of assessment required by the SEARs is limited to the flood risk on-site. It is requested that this be extended to include a full assessment of road access to the hospital site in a PMF event, as well as a full flood analysis of the route to Robina Hospital during a flood event.

The SEARs are set by the DPE and not by Health Infrastructure. In this instance, Health Infrastructure is an applicant to DPE.

The site selection process balanced a broad range of criteria of which flooding and flood access are part. However, there is little merit in assessing road access to the Project Site during a Probable Maximum Flood. This flood is considered a worst-case scenario and has an occurrence frequency in the range of one in many thousands of years. It is expected that during such an event in the Tweed Valley there would be widespread and sustained damage to extensive areas of existing housing, and most roads will be closed at one or multiple locations.

The Project Site allows the hospital and its road accesses to be constructed above the PMF, providing a place of refuge. This is a mandatory requirement for site selection for new hospitals in NSW, designed to prevent a full evacuation of the hospital, rather than ensure uninterrupted access.

However, there are no similar criteria for minimum levels of flood immunity/flood access required in siting a hospital, although as described in Section 2.4 of Appendix W submitted with the EIS (Flood Assessment), access is largely maintained to southern populations for flood events up to and including the 1% AEP flood event.



The SEAR has not requested an assessment of access to Robina Hospital during periods of flooding. Available advice on access to the north during times of flooding has been provided in Appendix W of the EIS, based on discussions with relevant agencies as noted. It was further confirmed that Robina Hospital was accessible during recent flood events, including the 2017 floods.

3.18.2 Access during Flood Events

Residents north of TTH will not be able to access the hospital during significant flood events.

All new hospitals delivered in NSW are required to be delivered at or above the Probable Maximum Flood (PMF) level and this criterion has been applied to site selection for the Tweed Valley Hospital. In this regard the selected site is adequate.

In terms of access to the Site, it must be recognised that every flood event is different in terms of magnitude, duration and location of impact. The flood modelling prepared for the Tweed River considers particular 'design' rainfall events prepared in accordance with accepted processes.

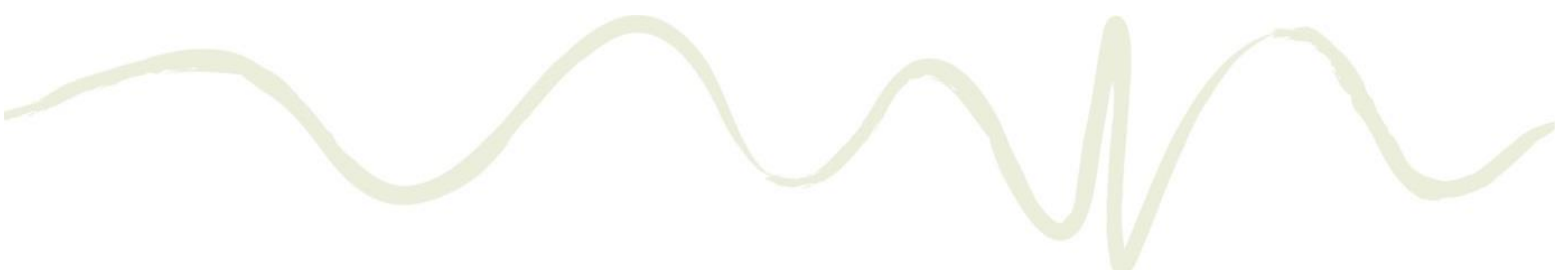
A key driver for the location of the new hospital, is equitable access for the entire population of the Tweed Byron Region. TTH is located at the far north of the Tweed LGA, which does not provide equitable access for the Tweed-Byron population. Despite being readily accessible to the residents of Tweed Heads, any residents attending from within the southern part of the catchment area have considerable travel distances in order to attend their major referral hospital. The location of TTH at the far northern end of the catchment also maximises the distance for hospital transfers from Byron Central Hospital and Murwillumbah District Hospital.

Flooding is a key risk across the Tweed Valley region and ensuring that the major population centres retain access to acute hospital services under 5% and 1% Annual Exceedance Probability (also referred to as Q20 and Q100) flooding events are important considerations. TTH sits approximately two to three metres below the Probable Maximum Flood (PMF) level. Retention of access to TTH during a major flooding event is a key issue for TTH, as was demonstrated during the 2017 floods, during which the existing and growing population centres to the south of Tweed River became cut off from access to the full range of acute hospital services, as did some of the residents of Tweed Heads.

This emphasises the need to consider equitable access arrangements, and the advantages of a more central location for the Tweed Valley Hospital in relation to the broader Tweed-Byron region. The Project Site for Tweed Valley Hospital and its immediate access roads are above the PMF, with good street frontage and various access points. There is alternative road access for the southern coastal population when the M1 and Tweed Coast Road are impacted by flooding.

Robina Hospital presents a viable option for residents north of the Tweed River to access a similar level of hospital if they are cut off from the Tweed Valley Hospital. In this regard, Section 2.4 of the Appendix W submitted with the EIS provides a description of expected access to the site during a 5% (i.e. 1 in 20 year ARI event) and 1% AEP (1 in 100 year ARI event) regional flood event.

It is agreed that due to flooding during a 5% AEP event (and above), that sections of the M1 and roads in Chinderah will likely be inaccessible limiting or preventing access from the north to the Project site. Our current advice is that road access to the south will be possible in events up to the 1% AEP, although this is based on consideration of a particular regional design flood event.



It is worth considering that no site assessed during the feasibility assessment phase was found to provide unimpacted flood time access to the serviced population areas during a 5% AEP event or above.

While the site is located above the PMF, access roads are not. Assessment of the impact of flooding on pedestrian access, and for people working at or visiting the hospital, is required.

All new hospitals delivered in NSW are required to be delivered at or above the Probable Maximum Flood (PMF) level and this criterion has been applied to site selection for the Tweed Valley Hospital.

The Project Site for the Tweed Valley Hospital and its immediate access roads are above the PMF, with good street frontage and various access points. There is alternative road access for the southern coastal population when the M1 and Tweed Coast Road are impacted by flooding. This will maintain access to acute hospital services for the population south of the Tweed River, with population centres to the north able to access Robina Hospital within approximately 30 minutes.

The EIS section related to regional flooding (Appendix W) provides a description of access to the Project Site during the 5% and 1% AEP flood events, limitations to access are described in therein. Detailed mapping was prepared during the site selection stage, including flood modelling from Byron Bay through to Kingscliff, and demonstrates that the majority of the region are able to access the Project Site during a 1% AEP flood event (Refer to Section 5.17 and Appendix W of the EIS for the Flood and Coastal Hazards Assessment).

The Office of Environment and Heritage (OEH) have reviewed the application and Flood and Coastal Hazards Assessment, as part of their responsibilities. OEH concluded in their comments that:

“Overall, the site is considered to be very satisfactory from a flood perspective as the operational portion of the hospital site is located above the PMF level as it meets the objectives and criteria of the NSW Floodplain Development Manual. There is also more than adequate freeboard so that future increases due to climate change will not impact the operational areas of the complex. Although the access to the north is flood affected, this is an issue that would be present for any development site chosen and the hospital will have access to a network of unaffected roads to the south.”

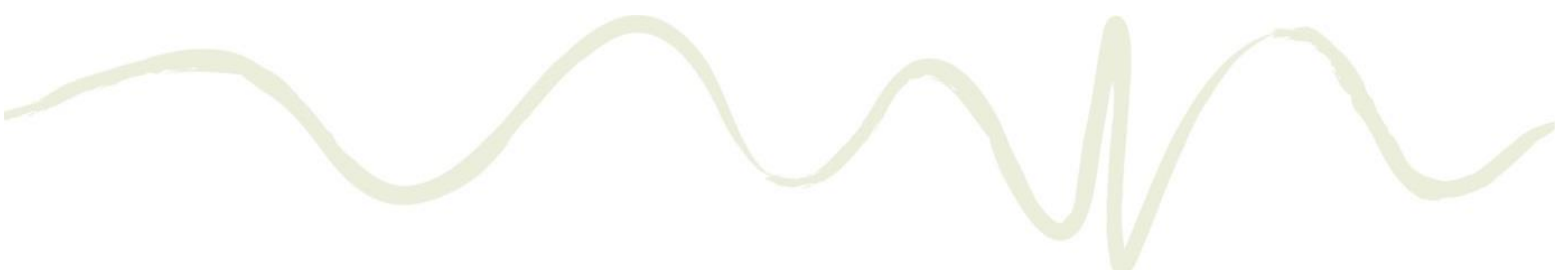
Refer to figures and mapping of road egress restrictions in 5% and 1% AEP flood events as prepared by BMT as part of the Flood Assessment (Appendix W of the EIS).

3.19 SEAR 18 – Bushfire

For additional issues relating to buffers are discussed under Section 3.20.3.

A peer review report on bushfire buffers, applied to the Tweed Valley Hospital, was submitted questioning the proposed bushfire buffers.

We note that both Planning for Bushfire Protection 2006 (PBP 2006) and the Pre-release Planning for Bushfire 2018 (PBP 2018) require identification of all vegetation formations, however when a range vegetation formations are present, the vegetation formation that presents the greater hazard is to be used. Based on vegetation surveys completed by Greencap and site inspections by Land and Fire



Assessments it was identified that the greatest hazard is provided by the Coastal Swamp Forest, accordingly this is considered as the Classified Vegetation for the purposes of determining the APZ. We further note that Peter Thornton has not considered this in his report when discussing vegetation classes and that the report notes that this is based on a limited site inspection.

Determination of effective slope should consider the ground under the Classified Vegetation (i.e. the Coastal Swamp Forest for the study area). PBP 2018 provides further guidance on determining the effective slope *“In identifying the effective slope, it may be found that there are a variety of slopes covering different distances within the vegetation. The effective slope is considered to be the slope under the vegetation which will most significantly influence the bush fire behaviour for each aspect”,* and that *“vegetation located closest to an asset may not necessarily be located on the effective slope”*.

Based on the 10 m contour mapping and observations from site inspections, the Coastal Swamp Forest is located on flat slope. We note that based on 0.5 m contour mapping, Peter Thornton identifies slopes ranging zero to five degrees downslope under the vegetation found along the edge of the Coastal Swamp Forest within the site, and agree with this determination, however for the majority, the vegetation on the edge is predominately Rainforest (actually considered Candidate Lowland Rainforest). If this was to be considered the effective slope, with rainforest as the classified vegetation for this area, the APZ would be 50 m using PBP 2006 and 57 m using PBP 2018.

An assessment undertaken by LFA supports that rainforest is not the Classified Vegetation in this instance, and as such were obliged to select the greatest hazard (i.e. Coastal Swamp Forest), additionally the effective slope to be used by LFA in the APZ calculation is that under the Classified Vegetation (i.e. Coastal Swamp Forest), which in this case is a flat slope and not the slope of the vegetation which is not the worst case scenario (i.e. Rainforest). This has resulted in LFA proposing APZ that is more conservative under the PBP 2018, i.e. 67 m compared to 47 m than if the vegetation classification type present (rainforest) at hazard interface was considered using a slope of zero to five degrees.

Exotic vegetation to the W/NW will ultimately be revegetated with rainforest communities which has not been considered in the report by Peter Thornton.

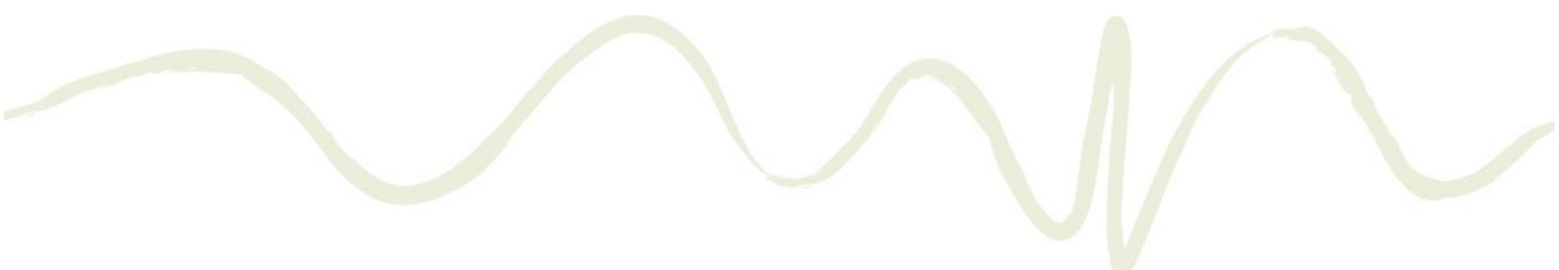
The NSW Rural Fire Service (RFS) were consulted as part of the planning process, and their response to a proposed APZ of 67 m between the Coastal Swamp Forest to the north of the proposed development site was: ‘It was accepted that 67 m separation distance, as prescribed by PBP18 was a good outcome’

3.20 SEAR 19 – Biodiversity

3.20.1 Site Selection

A more appropriate site should be selected, where there is no/minimal direct threat to significant or threatened species.

A comprehensive site selection process that examined the merits of more than 50 sites was undertaken, and this is detailed in the Biodiversity Development Assessment Report (BDAR) (refer Section 3.1 of BDAR). Other locations were discarded from consideration in favour of the Project’s



location due to the greater biodiversity values at those alternative sites as well a range of other considerations.

Refer to the discussion on the relevance of Site Selection to the assessment of the EIS, outlined in Section 3.1.3.

As discussed in the following sections, a comprehensive biodiversity assessment has been undertaken. It confirms the Project on the subject site as being acceptable without significant impacts to biodiversity.

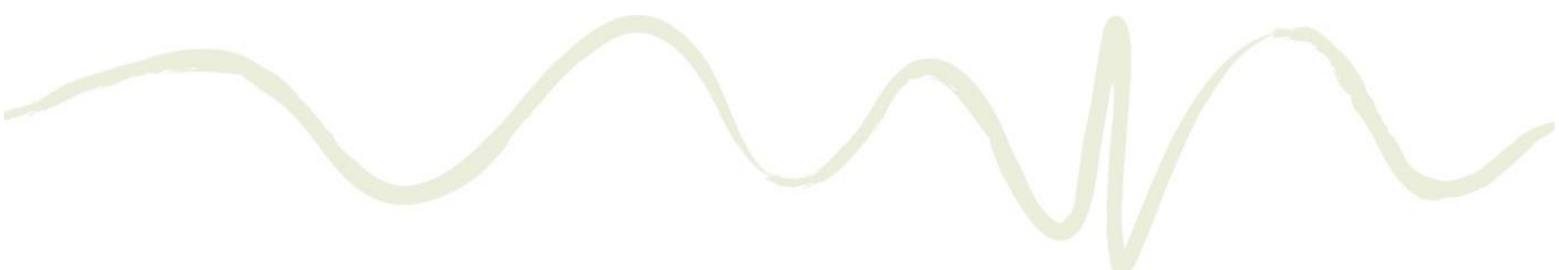
3.20.2 Biodiversity Assessment Methodology (BAM)

The process applied to the Biodiversity Assessment Methodology is queried.

- The BAM calculator generated nine ecosystem credits and two species credits. Although the report acknowledges the project has the potential to cause prescribed impacts the assessor considers “mitigation measures including adaptive management strategies will reduce the likelihood and consequence of any residual impacts to low levels that do require an offset”.
- Windrows not assessed. Windrows located through the project area consisting of piled rock, regrowth rainforest and woody weeds were classified as PCT 1302 subtropical rainforest. It is accepted that they do not conform as an EEC. These windrows were dismissed and had limited assessment. No information if there was on ground assessment for fauna particularly reptiles in these locations.
- The project site is located within a north south Regional Fauna Corridor. The current land use provides for fauna movement through the site. The windrows and remnant vegetation along Cudgen Road provide refuge for fauna movement.
- The report does not include any details of on ground assessment for the presence of fauna except for a spot assessment undertaken within the eastern Zone 6 for Koala presence. A document includes a comment from a fauna ecologist that it was the wrong time of year, August September, to assess for selected Threatened Species.
- The above points need to be addressed taking into consideration that problems have been encountered with the BAM calculator, no evidence of on ground fauna assessment (except SAT for Koalas), additional consideration and assessment required for Koalas and Mitchell Rainforest Snail.

The approach that was adopted in the original BDAR was undertaken with full consultation with the Office of Environment and Heritage (OEH). All departures from the BAM were documented, as advised by OEH. In addition, OEH conducted a comprehensive review and provided written assessment of the BDAR which has been followed for the revised version of the BDAR that included but was not limited to:

- Surveying of additional threatened species;
- Inclusion of mitigation measures particularly regarding the impact of vehicle strikes as well as habitat connectivity. A range of traffic calming and visibility measures that mitigate the risk of vehicle strikes have been proposed including: installation of roadside street lighting, installation of wildlife warning signs, speed limit signs and two permanent radar speed signs that display vehicle speed on approach and/or display a warning when the vehicle speed on approach is greater than the speed limit; and

- 
- Recommendations around the establishment of a wildlife corridor along the western boundary of the Project site.

The original BAM assessment was conducted prior to the acquisition of the Project Site. This assessment identified PCTs, vegetation zones and Threatened Ecological Communities for the former Lot 102 DP 870722. The current vegetation integrity scores for all vegetation zones has been retained for the final version of the BDAR, and in some sections for clarity, figures showing mapping for both the former Lot 102 DP 870722 and for the Project Site are presented.

The northern section of the Site is part of an important wetland mapped under the State Environmental Planning Policy (Coastal Management) 2018 (Coastal Management SEPP). At the time that the assessment was conducted the southern section of the Project Site was a working farm under cultivation (approximately 16.3 ha). Apart from the windrows planted along the Project Site boundary, most of the southern section of the Project Site has been cleared of native vegetation. No Areas of Outstanding Biodiversity Value (AOBV), as defined in the BC Act, or areas of geological significance are located on the Site.

For the purposes of the updated BDAR, attached at **Appendix E**, the subject land (the Site) is defined as the Project Site (i.e. Lot 11 DP 1246853) plus the Tweed Coast Road Crown Road Reserve (TCR Site) where additional development is proposed to be undertaken. These two development areas (the subject land) are collectively referred to as the Site throughout this BDAR.

The total area of the TCR Site is 0.29 ha and captures proposed roadworks and pavement widening to the west of the Project Site, part of which includes the removal of a tree on the road reserve.

A credit report has been included in the revised version of the BDAR that identifies the requirement for both ecosystem and species credits. For details of on-ground assessment for candidate species identified by the BAM Calculator refer to Section 2.4.5 and 2.4.6 of the BDAR at **Appendix E**.

A total of three ecosystem credits and 14 species credits were generated by the BAM calculator.

A decrease in vegetation integrity score for the 0.55 ha portion of Zone 4 and 0.40 ha portion of Zone 8 is due to the proposed clearing of native vegetation within these vegetation zones. However, the current VI score for Zone 4 falls below the assessment threshold for Endangered Ecological Communities (i.e. $VI \geq 15$), therefore in accordance with the BAM, no further assessment was required for these vegetation zones and it does not require offsetting. The current VI score for Zone 8 exceeds the assessment threshold for Endangered Ecological Communities (i.e. $VI \geq 15$) and requires offsetting.

Fourteen threatened species credits were generated by the calculator based on assumed presence (i.e. powerful owl *Ninox strenua* and three-toed Snake-tooth Skink *Coeranoscincus reticulatus*). Two threatened species credits were generated from confirming presence through a survey (i.e. stinking cryptocarya *Cryptocarya foetida*).

The BDAR has been peer reviewed by Dr David Robertson of Cumberland Ecology. The BDAR has adequately addressed all relevant matters. The BDAR and peer review statement are at **Appendix E**.

3.20.2.1 Koalas

The EIS has not collected baseline information regarding the immediate Koala population. Tweed Shire Council mapping indicates Koalas have been sighted on-site and in nearby areas. Koalas are likely to feed in Zone 6, and move through the site including the construction area to access habitat on adjoining lands. Zone 5 is likely to provide refuge for Koalas.

A comprehensive Koala assessment is required, including spot assessment in all vegetation zones.

Greencap conducted a Koala habitat assessment for the site in accordance with the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* guidelines and Koala habitat assessment tool (DOE 2004).

Koala surveys need to be done in accordance with OEH survey guidelines in all vegetation zones that will be impacted if this species is generated by the BAM as a credit species. As outlined above, the BAM Calculator did not identify the Koala as a candidate species in Zones 4 and 8, and therefore no additional surveys for this species were required.

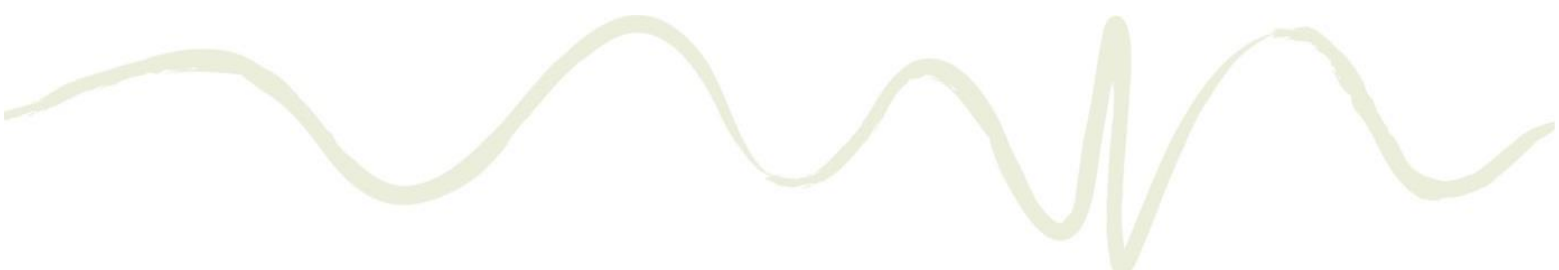
3.20.2.2 Wetland Proximity Zone

The EIS notes the destruction of the Wetland Proximity Zone to facilitate development of the permanent Water Quality Management Ponds. The use of this zone is prohibited by NSW law.

The *Coastal Management Act 2016* (CM Act) categorises the coastal zone into four coastal management areas based on the features of these locales (i.e. coastal wetlands and littoral rainforests area, coastal vulnerability area, coastal environment area and coastal use area). Supporting the implementation of the management objectives set out in the CM Act, State Environmental Planning Policy (Coastal Management) 2018 (Coastal Management SEPP) establishes a strategic land use planning framework for coastal management with mapping and clear planning provisions for each coastal management area to ensure consent authorities apply appropriate management tools and development controls.

The northern section of the Project Site is part of an important wetland mapped under the State Environmental Planning Policy (Coastal Management) 2018 (Coastal Management SEPP). At the time that the assessment was conducted the southern section of the Project Site was a working farm under cultivation (approximately 16.3 ha). Apart from the windrows planted along the Project Site boundary, most of the southern section of the Project Site has been cleared of native vegetation.

No areas of the site are mapped as 'Littoral Rainforests', 'Proximity Area for Littoral Rainforests', 'Coastal Vulnerability Area', 'Coastal Environment Area' and 'Coastal Use Area' under the Coastal Management SEPP. The northern part of the site supports areas mapped as 'Coastal Wetlands' and 'Proximity Area for Coastal Wetlands' under the Coastal Management SEPP and the proposed development footprint is outside of the areas mapped as 'Coastal Wetlands' with some overlap with



the 'Proximity Area for Coastal Wetlands'. No Areas of Outstanding Biodiversity Value (AOBV), as defined in the BC Act, or areas of geological significance are located on the Site.

The provisions of the Coastal Management SEPP in relation to the 'Proximity Area for Coastal Wetlands' do not prohibit development. Under this planning instrument, the proponent must demonstrate no significant impact on: the biophysical, hydrological or ecological integrity of the adjacent coastal wetland; or quality and quantity of surface and groundwater flows to the adjacent coastal wetland. It is understood that the engineering design for the development will incorporate integrated water cycle management and water sensitive urban design to fully address these issues. Given the existing conditions of the Project Site, it is expected that post development, water quality outcomes for the receiving environment would be improved.

3.20.2.3 Mitchell's Rainforest Snail

The EIS has not collected baseline information regarding the Mitchell's rainforest snail.

The BDAR (s. 2.4.6) details the targeted searches conducted for the Mitchell's Rainforest Snail, a candidate threatened species in Zones 4 and 8 as identified in the BDAR.

There was an opportunistic recording of Mitchell's rainforest snail *Thersites mitchellae* on 19 November 2018 by Dr Licari and David Milledge. One live specimen was recorded in a portion of Zone 2 and one dead shell was recorded in Zone 3 (Table 7) of the BDAR at **Appendix E**.

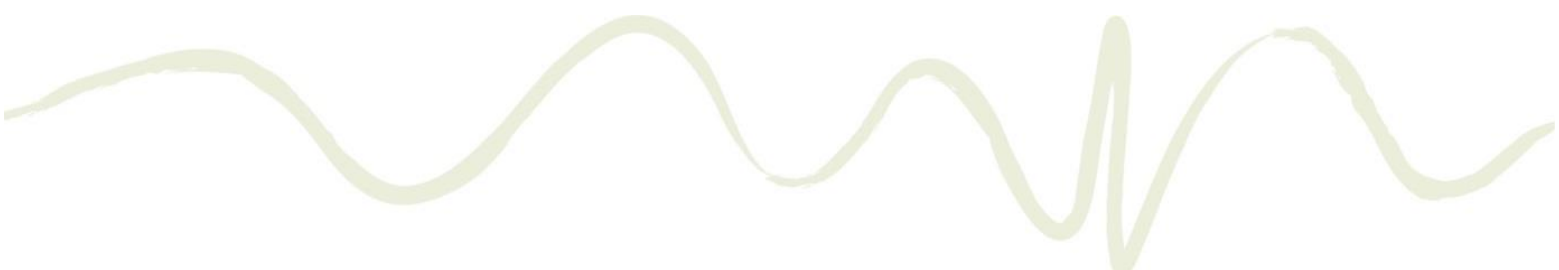
A targeted nocturnal spotlight survey for Mitchell's rainforest snail *Thersites mitchellae* was conducted on 17-18 December 2018 by Dr Licari and Kyle Spiteri in both Zones 4 and 8. Additional targeted diurnal and nocturnal surveys for the snail concentrating on Zones 4 and 8 were then undertaken on 19-20 December 2018 by Dr Stephanie Clark, a specialist in invertebrate identification. The targeted surveys conducted by Dr Clark included active diurnal habitat searches of logs, rocks, debris and leaf litter on the ground and a nocturnal spotlight survey for active snails. The target species was not detected in either of the above surveys (Table 7 of BDAR; **Appendix E**).

The Project will monitor and manage potential impacts which shall be outlined in a Biodiversity Management Plan (BMP) and its sub plans:

- Vegetation Management Plan (VMP) that incorporates regeneration and weed management of retained vegetation and performance criteria relating to associated components of the Landscape Plan.
- Water Quality Management Plan
- Fauna Management Plan (FMP).

The BMP will include adaptive management for impacts on biodiversity that are uncertain in accordance with Section 9.4.2 of the BAM and will include details of measures to monitor predicted impacts, guidelines and thresholds which will trigger adaptive management actions and other measures proposed to mitigate potential impacts.

The BMP will also address proposed measures that will contribute to the recovery of the Mitchell's rainforest snail *Thersites mitchellae* that are consistent with the published recovery plan (NPWS 2011) will be outlined in the VMP and FMP.



The EIS submitted as part of the SSDA determined that there would be no significant impact to matters of National Environmental Significance or Commonwealth land. For completeness and in response to submissions, an additional assessment of Matters of National Environmental Significance (MNES) as listed under the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) has been prepared by Greencap for the Project and is included as part of **Appendix E** (the MNES assessment is also summarised at Section 6.4.2).

The assessment considers a number of relevant species, including consideration for the Mitchell's rainforest snail. The report found that the proposed development area has been extensively cleared and the remaining corridors of rainforest regeneration occur on well drained land that is relatively dry. They are not suitable habitat for the Mitchell's rainforest snail.

An assessment of potential indirect and offsite impacts of the Project was undertaken e.g. water quality, water bodies and hydrological processes that sustain threatened species and TECs in the offsite areas. The Project has the potential to cause some indirect and offsite impacts, however, due to mitigation measures including adaptive management strategies it has been assessed that the Project will not have any significant indirect impacts on MNES entities.

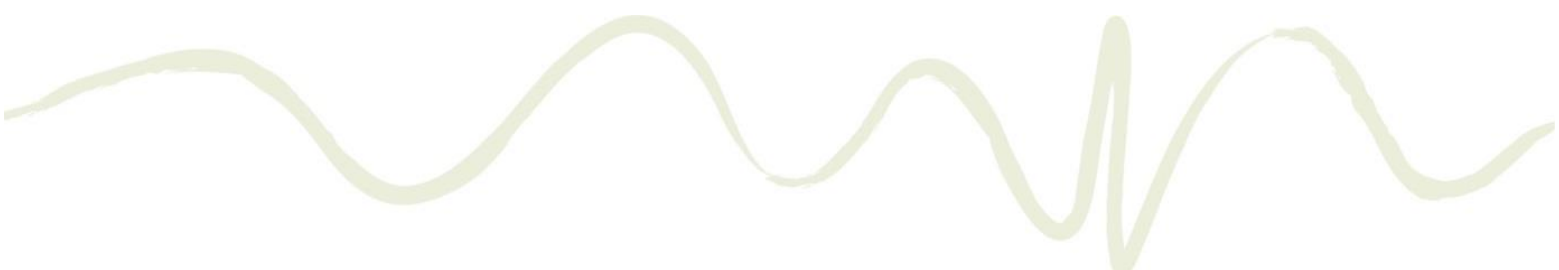
The application includes construction of permanent Water Quality Management Ponds, a retaining wall and other structures intended to manage runoff from the Hospital site. The use of this zone for development is prohibited by NSW law (SEPP) without demonstration of zero impact on the adjoining habitat and dependent species. The wetland is a key identified habitat for a scheduled species under the EPBC Act – including the Mitchell's rainforest snail, and also the Wallum froglet.

It will be requested that the Commonwealth intervene to prevent this work commencing pending a comprehensive environmental and species impact statement from the applicant, demonstrating zero impact.

The *Coastal Management Act 2016* (NSW) (CM Act) categorises the coastal zone into four coastal management areas based on the features of these locales (i.e. coastal wetlands and littoral rainforests area, coastal vulnerability area, coastal environment area and coastal use area). Supporting the implementation of the management objectives set out in the CM Act, State Environmental Planning Policy (Coastal Management) 2018 (Coastal Management SEPP) establishes a strategic land use planning framework for coastal management with mapping and clear planning provisions for each coastal management area to ensure consent authorities apply appropriate management tools and development controls.

No areas of the site are mapped as 'Littoral Rainforests', 'Proximity Area for Littoral Rainforests', 'Coastal Vulnerability Area', 'Coastal Environment Area' and 'Coastal Use Area' under the Coastal Management SEPP. The northern part of the site supports areas mapped as 'Coastal Wetlands' and 'Proximity Area for Coastal Wetlands' under the Coastal Management SEPP and the proposed development footprint is outside of the areas mapped as 'Coastal Wetlands' with some overlap with the 'Proximity Area for Coastal Wetlands'.

The provisions of the Coastal Management SEPP in relation to the 'Proximity Area for Coastal Wetlands' do not prohibit development. Under this planning instrument, the proponent must demonstrate no significant impact on: the biophysical, hydrological or ecological integrity of the adjacent coastal wetland; or quality and quantity of surface and groundwater flows to the adjacent coastal wetland. The EIS, including supporting biodiversity and stormwater assessments have considered these factors and no significant impact is anticipated. The detailed assessment of



Mitchell's rainforest snail is provided in **Appendix E**, supporting the BDAR and MNES reports. Operation of the stormwater management system is expected to result in water quality improvements and it will be designed to mimic natural flows to minimise future impact to the environmental area downstream. It is understood that the engineering design for the development will incorporate integrated water cycle management and water sensitive urban design to fully address these issues.

3.20.2.4 *Fruit Bat*

The impacts to the Fruit Bat population due to helicopter movement/operations has not been assessed. There is a risk of the bat colony being disturbed through helicopter noise, with no options for culling and EPBC restrictions on mitigation strategies for threatened species.

The potential strike risk between flying foxes and aircraft in flight is an acknowledged hazard for the Gold Coast Airport and aviation traffic across the Tweed Valley region. A flying-fox detection and notification program has been implemented at the airport to help reduce and manage this safety risk.

Birds, flying foxes and also drones are part of the everyday hazards that pilots need to consider during their planning and during the conduct of all flight operations. There are a number of flying fox colonies located near hospitals throughout the State, and pilots are vigilant to avoid them, particularly at dusk when flying fox colonies are most active.

Tweed Shire Council's 'Tweed Flying-fox Camp Management Plan' (March 2018) highlights 16 flying fox camps up and down the Tweed Coast. The Plan notes that camps are generally temporary and seasonal, and that flying foxes travel up to 100 km in a single night, with a foraging radius of up to 50 km from their camp.

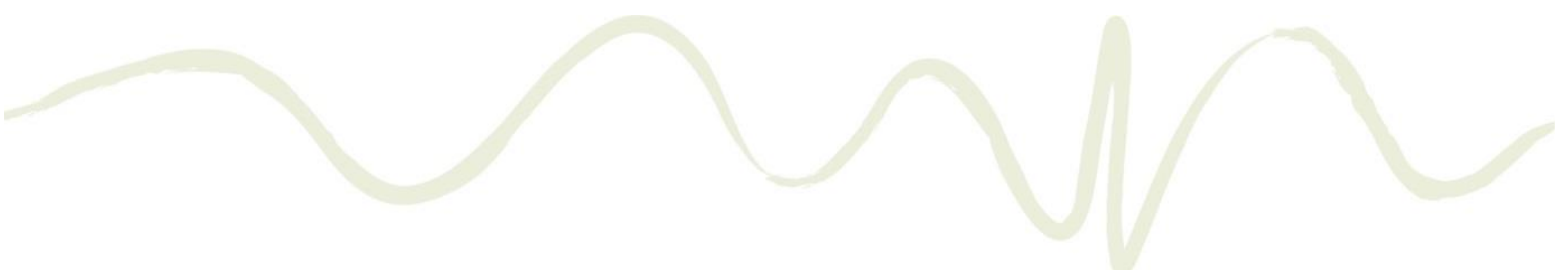
TTH is located 735 m north-west of the flying fox camp at Anchorage Island, and is considered a 'sensitive receptor'. The Council's Plan highlights a number of other preferred flying fox habitats across the Tweed Shire in close vicinity to the TTH, as well as most of the sites considered, and all of those shortlisted for the new hospital.

The immediate surrounds of the site for the new hospital are mapped as 'less preferred' flying fox habitat. The roof-top helipad will provide multiple options for approach and take-off, determined by hazards and conditions for each individual helicopter movement; as well as reducing the risk of coming into contact with low-level objects compared with ground-based landing sites (such as TTH).

Studies included in the EIS reviewed the proximity of flying fox camps to the site. These determined that there are two flying-fox camps located within a 1 km radius of the Site (BDAR by Greencap), however, there are no flying-fox camps located on the Site (Table 6).

The first camp is located east of the Kingscliff Library adjacent to the Cudgen Road/Herford Street intersection. Up to 100 black flying-fox *Pteropus alecto* have been recorded during quarterly monitoring events, however visibility at this camp is limited and the actual number is likely to be higher (Ecosure 2018). Furthermore, recent reports suggest that black flying-fox *Pteropus alecto* numbers at this camp may have increased to 2,000-3,000 animals in May-June 2018. However the most recent census on 16 August 2018 did not record any animals at the Kingscliff Library camp (Scott Hetherington, Tweed Shire Council, pers. com., 3 September 2018).

The second camp is located to the west of Elrond Drive, Chinderah. The camp is generally occupied by small numbers of black flying-fox *Pteropus alecto*, peaking at around 440 individuals (May 2015).



Around 150 threatened grey-headed flying-fox *Pteropus poliocephalus* (listed as vulnerable under both the BC Act and the EPBC Act) were recorded during surveys in November 2017 (Ecosure 2018).

Further, surveys of Flying Foxes have been undertaken including a nocturnal spotlight survey on foot 2.25 hours – Minimum one-hour search by two observers on two separate nights along the length of each windrow in Zones 4 and 8 on 15 and 17 Dec 2018 with no flying foxes detected.

The proposed development includes a helipad on the top of the main building which will result in low level air traffic in the vicinity of the sites. There is a risk that threatened species of birds and bats (in particular local populations of the threatened grey-headed flying-fox *Pteropus poliocephalus*) may be flying across the Site in remnant vegetation that is located at the level of the floodplain at the time of aircraft operation.

The helipad will be situated on the top of the multiple level hospital facility that is constructed on a ridge above the level of the floodplain. As such this location is considered to be above the flight path altitude of any birds or bats and will therefore not interrupt any local migration or cause death through aircraft strike.

At peak operation it is expected that aircraft movements would amount to six movements per week with an estimated flight time of two hours per annum. The nature of aircraft operation for the site are such that the majority of aviation movements are outbound (i.e. not inbound transport of trauma patients). Consequently, most outbound patient transfers would take place during the day when clinicians are available to make transport decisions. This would therefore avoid aircraft movements in the peak periods of flying fox activity in the hours preceding dusk and dawn. As a consequence the probability of aircraft strike on flying foxes is negligible.

The number of helicopter movements to and from the Tweed Valley Hospital will be relatively low, given that the hospital is not being planned as a major trauma centre. As a benchmark, the current number of helicopter movements to and from TTH is around two per week, mostly during daylight hours (i.e. away from peak flying fox activity).

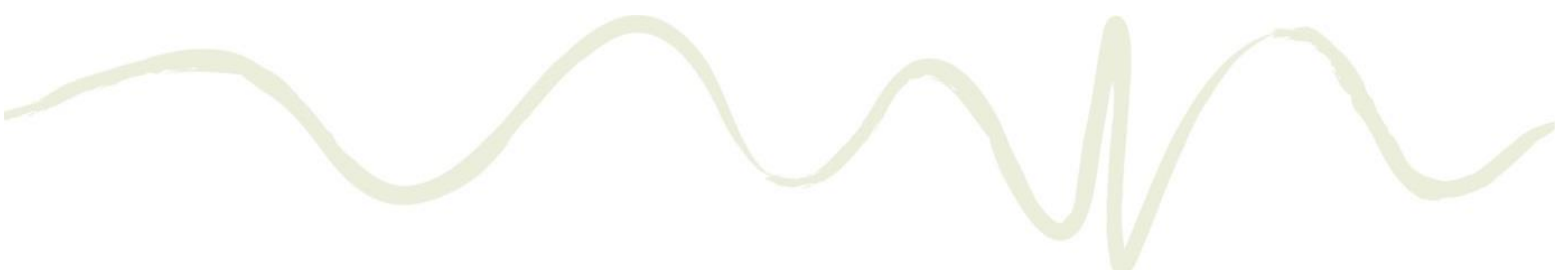
These assessments did not identify any significant aviation or ecological risks specific to the new hospital site posed by the local flying fox population. A revised BDAR and MNES report are attached at **Appendix E**, confirming no significant impact.

A helipad management plan will be implemented following operational commissioning of the new hospital to ensure the safety of both local fauna as well as aircrew and passengers. The management plan will include identification of sensitive areas in the general vicinity of the helipad at the new hospital, such as wildlife reserves and breeding grounds, on the aviation database for the hospital that will be used to inform helicopter operators and pilots.

3.20.2.5 *Regional Fauna Corridor*

The impacts to the Regional Fauna Corridor for threatened species has not been assessed.

A comprehensive site selection process that examined the merits of more than 50 sites was undertaken, and this is detailed in the BDAR Section 3.1. Other locations were discarded from consideration in favour of the Project's location due to the greater biodiversity values at those alternative sites as well a range of other considerations.



The regional fauna corridor mapping that affects part of the Project Site is acknowledged by OEH as more so an aspirational corridor. Generally, the Project footprint will be situated in areas which have already been cleared. Those areas of the Site which are important for connectivity, such as the vegetated northern environmental area would be maintained for their contribution to biodiversity values. The development will not directly impact any areas of intact remnant vegetation or areas of habitat connectivity as identified in the BDAR.

The proposed mitigation to protect wildlife movements from roads/increased traffic is inadequate.

In regard to refuge areas the BDAR (included at **Appendix E**) details that wildlife refuges will be improved throughout the site through landscape plantings and enhancement of vegetated buffers throughout the site.

The BDAR details mitigation measures particularly regarding the impact of both vehicle strike as well as habitat connectivity. A range of traffic calming and visibility measures that mitigate the risk of vehicle strike have been proposed including: including installation of roadside street lighting, installation of wildlife warning signs, speed limit signs and two permanent radar speed signs that display vehicle speed on approach and/or display a warning when the vehicle speed on approach is greater than the speed limit. The establishment of a 10 wide vegetated buffer along the western boundary, also accounting for APZ requirements, would support connectivity.

A Biodiversity Management Plan will incorporate a Fauna Management Plan, including adaptive management actions.

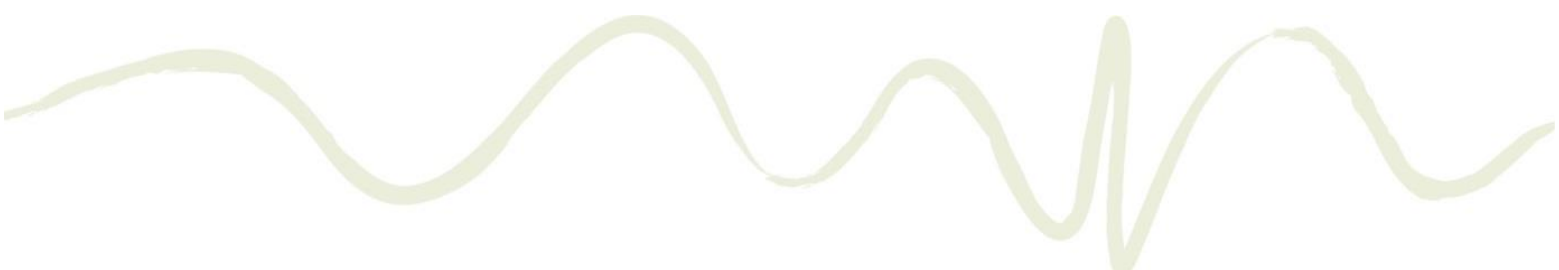
The recommended measures are adequate and as identified in the prescribed impact assessment of the BDAR, would result in the residual risk of vehicle strike being very low.

3.20.3 Ecological Buffers

The provision of ecological buffers to environmentally sensitive lands of 50 m is a well-established and standard practice for various Government Agencies. A minimum 50 m vegetated ecological buffer should therefore be applied from the environmentally sensitive lands (Coastal Wetland) adjacent to the proposed development footprint.

The main purpose of an ecological buffer to the coastal wetland areas is to mitigate the impacts of development on water quality. There are numerous guidelines and recommended distances for buffers issued by various Government Agencies depending on the type of project. The determination and establishment of buffers from ecologically sensitive lands needs to be considered on a case by case basis with regard to relevant guidelines.

As the Tweed Valley Hospital Project is classified as SSD it automatically requires the preparation of a BDAR which is assessed and determined by OEH. The BDAR (provided at **Appendix E**) is required to assess the biodiversity impacts of the project including the need for the inclusion of a range of measures to avoid and minimise the impact of development on biodiversity. In cases where impacts cannot be avoided or minimised, mitigation measures including but not limited to ecological buffers are identified.



The location of the building envelope has been selected to avoid and minimise the clearing of habitat areas of threatened species, including those that facilitate the movement that maintains their life cycle. The proposed building envelope is setback just over 70 m from the mapped Coastal Wetland to the north of the site. Within this setback is a mixture of rehabilitated vegetated land, APZ's, managed lands (including stormwater treatment and detention basins, sheet flow over mown grass and part of the ring road). It is noted that managed land is not normally considered part of an ecological buffer, which generally comprises native vegetation, however, all of the above measures contribute to mitigating the impacts on water quality.

The BDAR for the project undertook a comprehensive assessment of the proposal including indirect impacts on adjoining ecologically sensitive areas (such as the Coastal Wetland to the north). The BDAR concluded that while the proposed concept plan as proposed (including the proposed setback arrangement as mentioned above) could result some prescribed impacts on water quality in the Coastal Wetland, the identified mitigation measures, including adaptive management strategies, will reduce the likelihood and consequence to of any residual impacts to low levels that do require any biodiversity offsets (Refer updated BDAR at Appendix X). The project as proposed, including the proposed setback arrangement, is therefore justified and appropriate with regard to biodiversity impacts in general and in particular in relation to water quality in the Coastal Wetland.

3.21 SEAR 20 – Waste

No submissions were received relating to SEAR 20 – Waste.

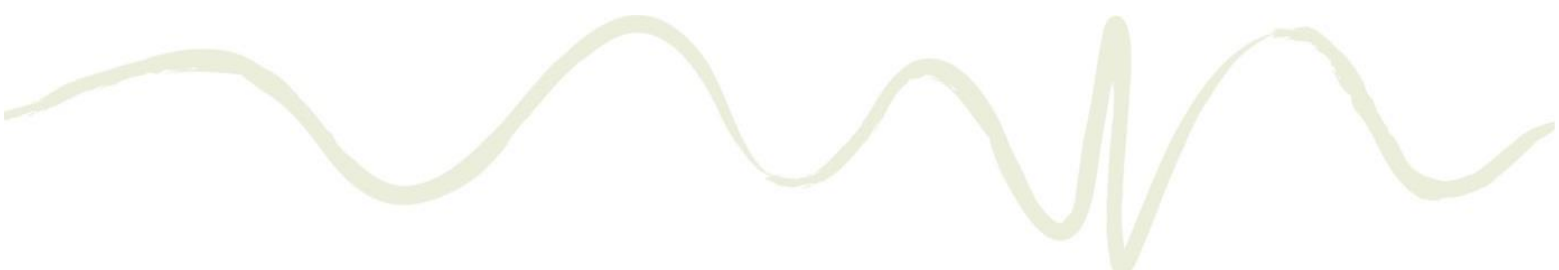
3.22 SEAR 21 – Community Engagement Strategy

3.22.1 Site Selection Consultation

Health Infrastructure has not followed the principles of the International Association for Public Participation, and did not consult adequately on-site selection. There was no consultation undertaken in advance of announcing the preferred site.

The site selection process occurred over two phases:

- Phase 1, August 2017 to March 2018 incorporated the public exhibition of Health Infrastructures intent to identify an acquire a site for the new regional referral hospital through a public Expression of Interest (EOI) stage. 35 sites were considered through this process, including twenty nominated by land-owners. A proposed site (being, the Project Site) on Cudgen Road, opposite Kingscliff TAFE was announced on 4 April 2018.
- Phase 2, April 2018 to June 2018, included a comprehensive community engagement process in relation to site selection, including the opportunity for the community to nominate alternate sites. During this consultation period, a wide variety of consultation channels were used, included:
 - The project website, including all available information, and how to provide feedback.
 - Direct contact and meetings with key stakeholders and groups.
 - Attendance of two publicly organised forums.
 - A dedicated 1800 telephone line.
 - Inviting written submissions, with a total of 604 submissions received.

- 
- Pop up community consultation sessions at regional shopping centres, markets, hospital receptions and staff forums.
 - Community drop-in session at the project office.
 - Staff forums.

Over 1000 people within the region were directly involved in the consultation process, either through face-to-face engagement or through the formal submissions process.

Numbers of active engagements, defined as a conversation, answering questions and provision of information, were captured by pop-up staff through field notes. Numbers of people who stopped to read information, take copies of collateral, but which did not have a conversation with pop-up staff were not counted.

All written submissions were collated, and compiled on an excel spreadsheet. Each written submission was provided a unique identifier, and content collated and reported.

The results of that public consultation process are captured in the relevant report at **Appendix H** of the EIS. Additional consultation since lodgement is outlined in Section 2 of this report.

The site selection ignores previous consultation and planning to limit development along the Kingscliff Coastal Strip.

The proposal's compliance with strategic planning and other policy is outlined in more detail in Section 3.3.2 of this report.

3.22.1.1 *Community Led Engagement*

The EIS does not acknowledge the community led engagement, including the parliamentary petition or number of members of the "Relocate Tweed Valley Hospital from State Significant Farmland" Facebook page.

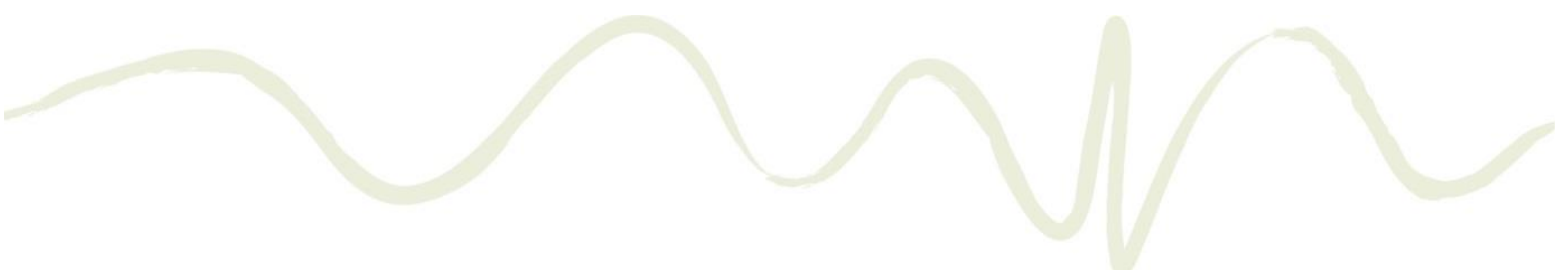
The consultation reports prepared reflected consultation activities undertaken by the Health Infrastructure.

Community led activities, including the "Relocate Tweed Valley Hospital from State Significant Farmland" Facebook Group, is acknowledged in the consultation report associated with the site selection stage.

The lodgement of the petition is a matter of public record, and does not relate to the consultation activities undertaken by Health Infrastructure.

3.22.1.2 *Stakeholder Engagement*

Council's resolution and position on the project has not been acknowledged.



Council is a key stakeholder in the project. Engagement has occurred, and is ongoing, throughout the project including with Council technical staff, and through a Council Working Group, that has met six times during 2018 to review and discuss various aspects of the project, including site selection.

Council's resolution is a matter of public record. As a key stakeholder/referral agency, Council had the opportunity to lodge a formal submission in relation to the EIS. This provides the formal channel for their position on the proposal to be assessed and responded to. A response to Council's submission is provided at Section 4.3 (Table 4-2).

3.22.1.3 *Extent of Engagement*

The community was not adequately informed that the hospital in Tweed Heads would close following relocation to Kingscliff.

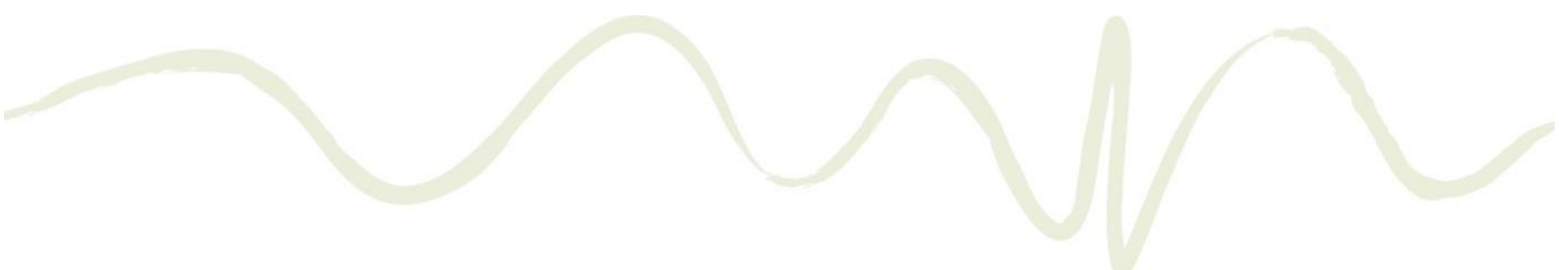
At a public meeting on 18 June 2018, organised by Tweed Daily News, the Minister for Health confirmed that all acute services would relocate to the new facility, however a commitment was made to ensure ongoing access to health facilities within Tweed Heads CBD once all acute services transfer to the Tweed Valley Hospital.

The EIS clearly states that the relocation of the hospital from the Tweed Town Centre would also be mitigated by retaining suitable community health and other out-of-hospital services in Tweed Heads. It is further noted (in addition to this statement in EIS) that NNSW LHD is progressing its planning for some community health services to be retained in Tweed Heads, to provide ready accessibility for the Tweed Heads community.

Preliminary planning undertaken by NNSW LHD has identified a "HealthOne" service in Tweed Heads. There is a strong rationale for establishing a HealthOne facility in the Tweed Heads CBD. The HealthOne will provide Community and Allied Health services to the population of Tweed Heads, Tweed Heads South and Tweed Heads West, Terranora and Cobaki. This is relatable to the Pottsville Community Health Centre. While this preliminary plan is subject to clinical and community consultation, as well as appropriate funding, the following services are being considered for inclusion:

- Community and Allied Health services.
- Child and Family Health Nursing services.
- Oral Health services.
- Aboriginal Health and Integrated Aboriginal Chronic Care (IACC) services.
- Mental Health and Drug and Alcohol services will be provided at need.
- BreastScreen Screening and Assessment service services. BreastScreen NSW will base their service for the Tweed Valley at the HealthOne facility. In parallel, consultation with public transport and community transport providers has commenced, to enable appropriate planning for transport arrangements between Tweed/Tweed Heads and Tweed Valley Hospital. This strategy will consider contemporary models of care, including healthcare that could be provided locally rather than at a hospital. In parallel, consultation with public transport and community transport providers has commenced, to enable appropriate planning for transport arrangements between Tweed/Tweed Heads and Tweed Valley Hospital.

Tweed Heads residents will have the option of either accessing services at the HealthOne facility, or travel to Tweed Valley Hospital Ambulatory Care Centre with an estimated driving time (EDT) of 20 minutes to access the full range of Community and Allied Health services and Outpatient services.



Tweed Heads South and Banora Point residents will be able to travel north or south with the same EDT (20 minutes) to access services at the HealthOne facility, or the Tweed Valley Hospital Ambulatory Care Centre.

The methodology followed in quantifying responses to the consultation, both at pop-ups and written feedback is questioned. Advice was provided that the intent of the consultation was to seek feedback from the community, and accept nominations on the Project Site, rather than a vote on the site.

The aim of the consultation undertaken during the first stage of community pop-ups, and the written site nomination process, was to seek feedback on the Project Site, and to explain to community how to nominate alternative sites.

The tone of pop-ups was deliberately conversational. Individuals are more likely to engage in a conversation, than stop to answer a structured questionnaire. This provides a non-confrontational environment that allows people to comment in their own words, and in their own time.

Notwithstanding the conversational tone of pop-ups, a standard script was used to engage individuals, and encourage discussion, including:

- Testing awareness of the project.
- Testing opinion on the need for a hospital.
- Testing opinion on the subject site.
- Testing whether individuals had a suggested alternative site.

During the pop-ups, field notes were kept acknowledging all comments made by the community. Noting the high level of public awareness of the project, individual opinion on the project was evident without requiring specific quantitative methodology. Each conversation was noted in field notes as numerical value in one of three columns, either supportive, neutral, or opposed.

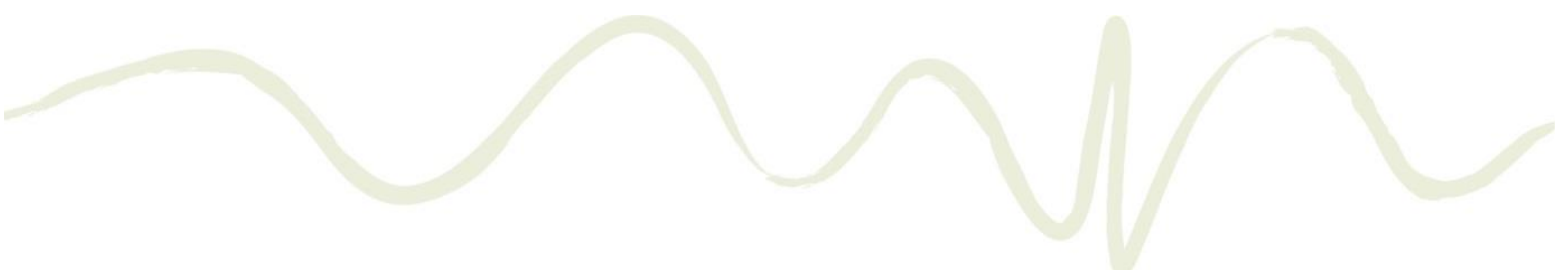
Similarly, written submissions were structured to accept feedback on the Project Site, and nomination with reasons for alternative sites. Response to the Project Site very clearly outlined either support, opposition or neutrality to the site, and were compiled in a detailed analysis of each submission received.

While submitters focus on the numerical outcomes of the consultation, they ignore the significant additional information compiled and provided to the project team for consideration, and therefore the value of the consultation process to the project.

This included noting suggested alternative sites. Every site mentioned at pop-ups, or through the formal nomination form, were all provided to the project team for assessment against the site selection criteria, and progressing to further investigation where appropriate.

In addition, community comments in relation to topics of concern, including but not limited to:

- Design and height
- Provision of outdoor spaces as part of the healing process
- Traffic, access and parking
- Public transport and accessibility for existing Tweed residents and vulnerable residents
- Social impact, and crime prevention



were noted, and informed the various specialist studies completed as part of the EIS, as well as having a direct influence on the master planning process.

The consultation process therefore achieved the dual aim of seeking feedback on the site, as well as accepting nominations of alternative sites. Further, information was provided to the community on how to lodge a formal submission, including the distribution of site selection nomination forms and contact details for the project, ensuring widespread understanding of how to participate in the project.

There has been a bias to the pop-up consultation, with results from written responses ignored.

The outcomes of both pop-ups and the written submissions were considered in the assessment process.

As noted above, comments in relation to the proposed site (being, the Project Site), as well as non-site specific comments, influenced the site selection and specialist input into the development of the EIS.

The NNSW LHD was not consulted on-site selection.

Notwithstanding comments made by submitters, the NNSW LHD is a key stakeholder in the delivery of the Tweed Valley Hospital. Members of the LHD form part of the Integrated Project Team working to deliver the hospital and the NNSW LHD is a key stakeholder in Project Governance.

The statement that consultation was extensive is challenged. The pop-ups should have been held more broadly across the region. The location of pop-ups was weighted heavily to markets.

The location and number of pop-ups were designed to provide balanced accessibility across the region. This included recommendations from Tweed Shire Council through the Council Working Group.

A weighting was placed on Kingscliff and Tweed communities, as those more directly affected by the site location and relocation of services, while shopping centres were chosen based on their role in the broader region.

It is noted that the level of interest in the project was notably reduced the further geographically the pop-ups were from the site, with a notable decrease in participation in locations such as Byron Bay, Uki, and even Pottsville, supporting the decision to focus consultation efforts on the more affected populations, while providing some opportunities regionally.

It is also noted that the pop-ups were not the only consultation tool, with the following supporting consultation:

- All information was made available through the project website, in static displays at TTH and collateral made available at Murwillumbah District Hospital, Council offices and the Local Member's electoral office.

- A 1 800 line was also available,
- Drop-in sessions were available by appointment.
- Feedback forms were made available in hard copy, including being hand delivered at request to ageing residents with no internet access, to their place of residence.
- Frequent media releases, and related newspaper articles made all information publicly accessible.
- An online survey.

Further, consultation was not limited to direct community engagement alone, but also key stakeholder and staff engagement that included:

- Regular staff forums at TTH, Murwillumbah District Hospital and Byron Central Hospital.
- 28 staff newsletters in 2018, distributed to close to 2600 LHD staff.
- Regular meetings of the Council Reference Group.
- Regular meetings with the Community Reference Panel, and an open invitation for community membership.
- Detailed engagement with multiple Government agencies and service providers.
- Project user groups comprising over 600 clinical and operational hospital staff have been involved since early 2018 in the preparation of functional briefings to inform the design of the new hospital.

The consultation process for the project continues to evolve, taking into account suggestions by the community on delivery, and to align with the appropriate level of consultation for the project stage.

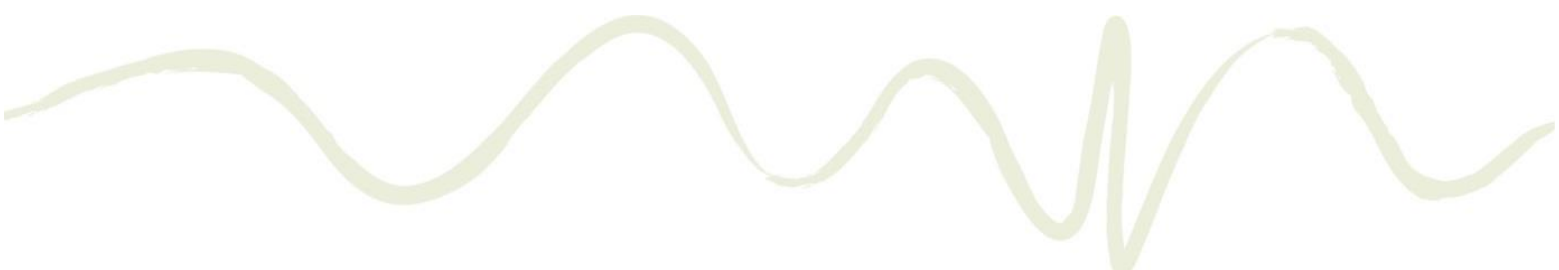
The consultation is therefore considered thorough, considered and extensive. All feedback has been considered and formed part of both site selection and the EIS, with equal consideration given to all stakeholders, including the community.

The consultation has not allowed the ageing demographic to participate in the consultation process, as it was predominantly online.

Equal opportunity was provided for the ageing demographic, or those that are not computer literate, to participate in the consultation process:

- The choice of location for pop-ups, specifically TTH, Tweed Mall and Tweed City were selected to access ageing populations.
- The date and time of pop-ups in these locations aligned with key factors such as pension days and peak shopping periods at the advice of shopping centre management.
- Hard copy forms were made available at a range of locations, noting that the majority of submissions were received were handwritten, and either dropped off at TTH reception, or mailed to the Integrated Project Office. Hard copies of forms were also hand delivered to residences in Tweed Heads, on request.
- Hard copies of the site selection summary report and other project collateral were made available to members of the community at pop-ups, and at Tweed Hospital reception, as well as at the Local Member's electoral office.

The above notwithstanding, it is noted that close to 23 percent of respondents to the online survey conducted by Health Infrastructure were aged 64 or older, representing the third highest age group to respond.



The information provided during consultation was weighted to the Project Site, and did not provide sufficient information on other shortlisted sites.

The purpose of the consultation was to receive feedback on the proposed site (being, the Project Site), and the nomination of alternatives.

Details on all sites considered during the first stage of the site selection was made available both online and in hard copy through the Stage 1 Site Selection Summary report, which provided information on other sites considered, and why they were not considered suitable, noting individual sites could not be identified due to privacy requirements.

The outcomes of the pop-ups and written responses were quantified; however this information was not provided for the drop-in sessions.

The purpose of the drop-in sessions was to provide interested parties the opportunity to talk to and ask questions of the project team directly, to provide transparent access to information on the project.

The methodology applied to the pop-ups and written feedback in terms of testing opinion on the proposed site (being, the Project Site) was not applied during the drop-in sessions, and as such it is not possible to provide the same quantified outcome.

It is noted that the most, if not all, of these individuals provided a subsequent written submission, and their perspectives were consequently captured in that component of reporting.

3.23 SEAR 22 – Impact on Airspace

3.23.1 General Comments

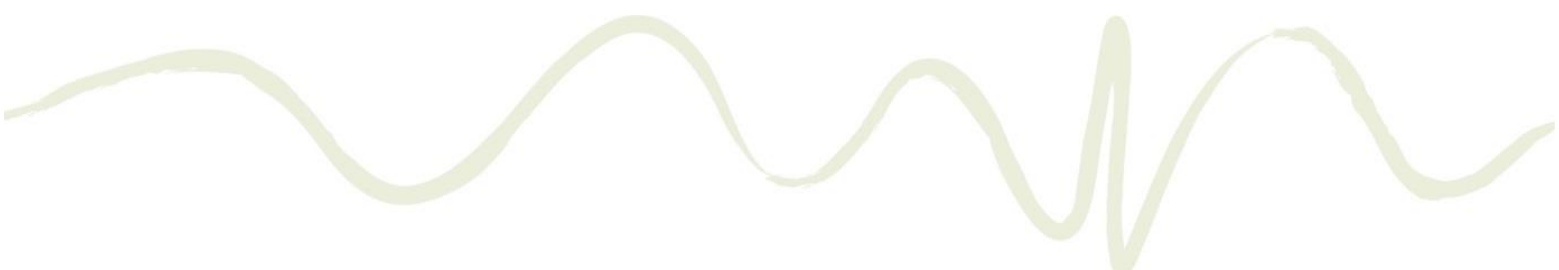
3.23.2 Bird and Mammal Hazards

The assessment does not adequately assess bird and mammal hazards, specifically flying fox.

Bird and/or bat hazards exist around most hospitals that are helicopter-capable.

The potential strike risk between flying foxes and aircraft in flight is an acknowledged hazard for the Gold Coast Airport and aviation traffic across the Tweed Valley region. A flying-fox detection and notification program has been implemented at the airport to help reduce and manage this safety risk.

Birds, flying foxes and also drones are part of the everyday hazards that pilots need to consider during their planning and during the conduct of all flight operations. There are a number of flying fox colonies located near hospitals throughout the State, and pilots are vigilant to avoid them, particularly at dusk when flying fox colonies are most active.



Tweed Shire Council's 'Tweed Flying-fox Camp Management Plan' (March 2018) highlights 16 flying fox camps up and down the Tweed Coast. The Plan notes that camps are generally temporary and seasonal, and that flying foxes travel up to 100 km in a single night, with a foraging radius of up to 50 km from their camp.

TTH is located 735 m north-west of the flying fox camp at Anchorage Island, and is considered a 'sensitive receptor'. The Council's Plan highlights a number of other preferred flying fox habitats across the Tweed Shire in close vicinity to the existing TTH at Tweed Heads, as well as most of the sites considered, and all of those shortlisted for the new hospital.

The immediate surrounds of the site for the new hospital are mapped as 'less preferred' flying fox habitat. The roof-top helipad will provide multiple options for approach and take-off, determined by hazards and conditions for each individual helicopter movement; as well as reducing the risk of coming into contact with low-level objects compared with ground-based landing sites (such as TTH).

The number of helicopter movements to and from the Tweed Valley Hospital will be relatively low, given that the hospital is not being planned as a major trauma centre. As a benchmark, the current number of helicopter movements to and from TTH is around two per week, mostly during daylight hours (i.e. away from peak flying fox activity).

Studies included in the Environmental Impact Assessment reviewed the proximity of flying fox camps to the site. These were taken into account in assessing the suitability of the site, including consideration of helicopter operations.

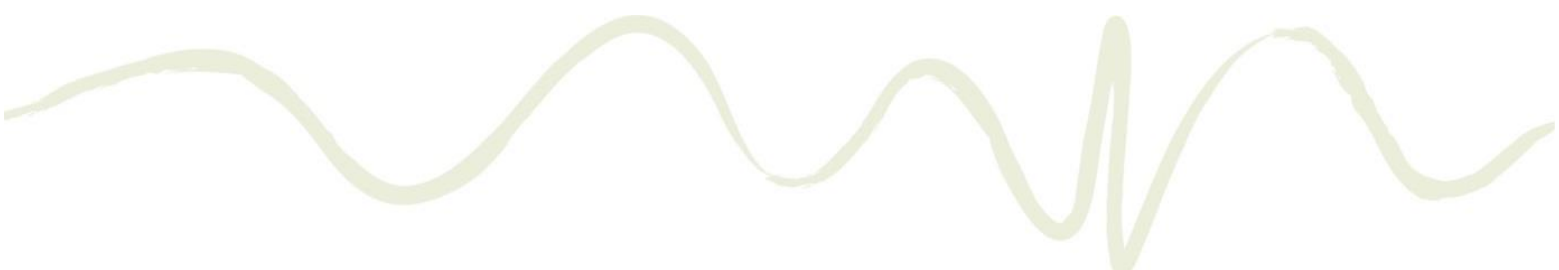
These assessments did not identify any significant aviation or ecological risks specific to the new hospital site posed by the local flying fox population. The revised BDAR and MNES reports are attached at **Appendix E**.

A helipad management plan will be implemented following operational commissioning of the new hospital to ensure the safety of both local fauna as well as aircrew and passengers. The management plan will include identification of sensitive areas in the general vicinity of the helipad at the new hospital, such as wildlife reserves and breeding grounds, on the aviation database for the hospital that will be used to inform helicopter operators and pilots.

3.23.3 Aviation Noise – Impact on Residents

The impact of aviation noise on surrounding residents is not fully assessed. This could occur anywhere in a 24-hour cycle, and in a rural setting can be disturbing, with potential health impacts.

Tweed Valley Hospital is a Level 5 Regional Referral Hospital. As outlined in the introductory discussion on Understanding the Clinical Services Planning Hierarchy (Section 3.1.4), TVH is not a tertiary facility, and will not deliver Level 6 trauma services as provided by Gold Coast University Hospital (GCUH). Most helicopter movements will be pre-planned transfers of in-patients to higher level hospitals and these will occur mostly during daytime working hours. Inwards movements at night will be rare. Total numbers of movements at The Tweed Hospital currently averages 2 per week, there is expected to only be a slight increase on these numbers. Any notion that TVH will have two to three movements per day is misplaced. That level of activity is only experienced by the "busiest" helicopter-capable hospital in the State of NSW (John Hunter Hospital).



The siting of the Helicopter Landing Site (HLS) within the TVH campus, and recommended approach and departure flight paths have been selected with the concerns of residents in mind. Flight paths will avoid overflying residential areas to the maximum extent possible. Local people closer to the hospital will notice the noise but the overall impact will be less per helicopter movement than is currently experienced by people close to TTH because the Tweed Valley Hospital HLS will be elevated while the existing HLS is ground level. Helicopter movements will be occasional at worst and the notion that the helicopters operating to and from the HLS at the Tweed Valley Hospital will cause a “severe disturbance” is uninformed. It should be understood that as part of commissioning process for the HLS, an Operations Manual will be developed specifically for the HLS. The development of the Manual will necessarily involve consultation with HEMS operators and will address safety, procedural and HLS utilisation and maintenance issues specific to this hospital.

There was no consultation with the community on this matter.

The issue of aviation noise, and in particular helicopter flights, was raised as a concern during community pop-ups, through written submissions, and at Council Reference Group and Community Reference Panel meetings. Concern relating to helicopter noise is reflected in the consultation reports at the EIS Appendix H. This community concern was made available to Health Infrastructure’s advisor, and informed the assessment of the proposal.

During the consultation processes, including pop-ups, Council Reference Group meetings and Community Reference Panel meetings, where it was raised as an issue, it was also clarified that:

- TTH receives on average two helicopter flights per week. This is unlikely to change as the proposed Tweed Valley Hospital will not be a trauma hospital.
- Helicopter flight paths have been established to avoid built-up areas to the maximum extent possible. This is shown in the aviation assessment submitted with the EIS (Appendix AA of EIS).

3.24 SEAR 23 – Underground Petroleum Storage System

No submissions were received relating to SEAR 23 – Underground Petroleum Storage System.



4. Government Submissions

4.1 Response Government Agency Submissions

All government agency submissions have been considered and the key issues raised in relation to the Project are summarised in Section 4.3 of this Submissions Report. Supporting responses from relevant Project specialist consultants are attached as appendices.

4.2 Summary of government agency submissions

Submissions received from the following Government agencies:

Federal Government

- Civil Aviation Safety Authority (CASA)
- Airservices Australia.

State Government

- Department of Industry – Water and Natural Resources Access Regulator
- Department of Industry Lands and Water Division (Primary Industries – Agriculture)
- Water NSW
- Environment Protection Authority (EPA)
- Office of Environment and Heritage (OEH)
- Heritage Council of NSW
- Rural Fire Service (RFS)
- Roads and Maritime Service (RMS)
- Transport for New South Wales (TfNSW)
- DPE – Government Architect NSW (GA NSW).

Local Government and Other

- Tweed Shire Council (TSC)
- Gold Coast Airport.

A Statement of Key Issues and Other Matters was also provided by the Department of Environment and Planning which is also addressed within this Response to Submissions Report in Section 4-4.

4.3 Response to issues raised in government agency submissions


Table 4.1 provides a summary of the government agency submissions received, the issues or comments raised, and provides responses to these.

Table 4-1 Response to Government Agency Submissions

<i>Agency</i>	<i>Issue/Comment/Recommendation</i>	<i>SEAR</i>	<i>Response</i>
Federal Agencies			
Civil Aviation Safety Authority (CASA)	<p><i>Comments</i></p> <ul style="list-style-type: none"> ■ The planning and design considers relevant legislation and documentation for the design of a helipad. ■ The proposal will not infringe the Obstacle Limitation Surfaces for Gold Coast Airport. ■ Consultation should occur with the following: <ul style="list-style-type: none"> – Airservices Australia - at the planning stage; – Helicopter operators - at the design stage; and – Gold Coast Airport P/L at the construction phase in relation to crane activity. 	22 (Concept Proposal)	Noted and agreed.
Airservices Australia	<p><i>Comments</i></p> <p>Airspace Procedures</p> <ul style="list-style-type: none"> ■ The maximum height of the hospital will not affect any sector or circling altitude, nor any instrument approach or departure procedure at Gold Coast Airport. ■ The hospital development will not affect any RTCC. ■ Procedures not designed by Airservices at Gold Coast Airport were not considered in this assessment. 	22 (Concept Proposal)	Noted and agreed.




Agency	Issue/Comment/Recommendation	SEAR	Response
	Communications/Navigation/Surveillance (CNS) Facilities <ul style="list-style-type: none"> This proposal will not adversely impact the performance of any Airservices CNS Facilities. 		
State Government Agencies			
Department of Industry (Dol) - Water and Natural Resources Access Regulator	<i>Comment</i> <ul style="list-style-type: none"> Water Management Plans (including construction environmental management plans) should be developed in consultation with Dol – Water and Natural Resources Access Regulator. The EIS should demonstrate that adequate licences are available and can be obtained to account for the take of groundwater should the Project intercept groundwater. 	14 (Concept Proposal) 11 (Stage 1 Works)	<ul style="list-style-type: none"> Noted and agreed. The proposed design does not propose any excavations below the water table (except for piling). The Geotechnical Report (Appendix Q of the EIS) identifies that the water table is approximately at RL 11.0m. The finished floor levels of the proposed hospital will be above RL 11.0 and will not require lowering the water table or dewatering. During piling, it is proposed to use a continuous flying auger (CFA). This method of pile construction manages any incursions of the water table wholly within the pile bore without taking water from the aquifer. If, in the detailed design of the Stage 1 Early Works, it is determined that a groundwater licence is required, an application to the relevant authority will be made and the appropriate/ required licence will be obtained.
Department of Industry Lands and Water Division	<i>Comment</i> <ul style="list-style-type: none"> Approval of the Proposal will set a precedent for development of other SSF. 	4 and 6 (Concept Proposal)	As outlined in Sections 5.6 and 7.4.4 of the EIS, it is not considered that the Project would result in a precedent that would influence/ cause potential additional future development impacts on State Significant Farmland (SSF)




Agency	Issue/Comment/Recommendation	SEAR	Response
(Primary Industries – Agriculture)			<p>beyond the Project Site. This consideration is based on the following:</p> <ol style="list-style-type: none"> 1. There would be a very small loss of SSF on the urban fringe. Approximately 16 ha of the Site is mapped as SSF, which equates to around 2.8% of SSF mapped for the Cudgen Plateau [580 ha] and 0.13% of the SSF mapped for the Far North Coast. The agricultural assessment at Appendix J found the total potentially arable area that would be lost is 12.01 ha. However, the main SSF area of the Cudgen Plateau is separated from the Project Site and would not be affected. The Project Site's location on the northern side of Cudgen Road ensures there is minimal fragmentation of SSF and the remaining SSF would not be adversely affected. 2. The project is for essential public infrastructure and the site was selected as the best location and outcome for the new hospital in the Tweed-Byron catchment from an extensive site selection and evaluation process that considered a large range of criteria. 3. The site is being rezoned by way of a draft SEPP undertaken and administered by the Department of Planning and Environment (DPE) and is specific to the Project Site. This rezoning process can only be used in certain circumstances



Agency	Issue/Comment/Recommendation	SEAR	Response
			where DPE consider the rezoning of the land is of State significance.
	<p><i>Comment</i></p> <ul style="list-style-type: none"> ■ Rezoning of the site to SP2 Infrastructure for the purposes of a hospital may lead to further development into State Significant Farmland adjacent to the hospital for associated health and medical developments. 	4 and 6 (Concept Proposal)	The draft SEPP and rezoning process is being undertaken and administered by DPE and is specific to the Project Site (refer to comments above). Health and medical uses associated with the hospital can be accommodated on the site in accordance with the masterplan.
	<p><i>Recommendation</i></p> <ul style="list-style-type: none"> ■ Further assessment of soils, land capability and alternative cropping required. 	4 and 6 (Concept Proposal)	<p>An additional assessment has been prepared by ARC Group to address the issues raised by DPI Agriculture. This report is attached as part of Appendix J. The report provides more detail on:</p> <ul style="list-style-type: none"> ■ Soil type; ■ Impacts on the loss of SSF and associated loss of food production value; and ■ Recommended mitigation measures to be undertaken as part of the Project. <p>HI also engaged Turf Design Studio to assess the existing landscape condition, and provide recommendations for ongoing management of the landscape. The report provides a range of options for the management of each landscape zone and also provides advice on the condition, volume and potential reuse of the topsoil on the site. This report is attached as part of Appendix J.</p>



Agency	Issue/Comment/Recommendation	SEAR	Response
	<p><i>Comment</i></p> <ul style="list-style-type: none"> DPI Agriculture is supportive and requests involvement in investment and strategies that will lead to increased agricultural production in the region should the proposal proceed. 	4 and 6 (Concept Proposal)	Noted and agreed. Section 4.4.1.4 outlines that the Department of Premier and Cabinet (DPC), with the support of the Tweed Valley Hospital Cross Agency Planning Committee, including Health Infrastructure, is currently pursuing a collaborative opportunity with relevant agencies, outside of the Project, to support the agricultural industry in the region.
	<p><i>Recommendation</i></p> <ul style="list-style-type: none"> Local produce should be utilised as part of the hospital's food procurement. Any excess land could be designed to include edible gardening opportunities for rehabilitating patients. 	4 and 6 (Concept Proposal)	<p>Noted. Once operational, the hospital will be required to comply with State Purchasing Policies in terms of value for money, and competitive procurement. During operational commissioning, Northern NSW businesses will be supported through the Industry Capability Network in the same manner proposed for construction opportunities. Further to this, Initiatives such as The Buy Local Project Northern Rivers, an existing partnership between Lismore City Council, NNSW LHD and University Centre for Rural Health are being considered for development with Tweed Shire Council and other interested parties to encourage further local business participation.</p> <p>Opportunities for incorporating edible plant varieties within the landscape design will be considered as part of the landscape design development process, which subject to feasibility will be detailed and submitted as part of the Stage 2 SSD/DA planning submission.</p>



Agency	Issue/Comment/Recommendation	SEAR	Response
	<p><i>Comment and Recommendation</i></p> <ul style="list-style-type: none"> ■ DPI Agriculture is supportive of well vegetated buffers on the western, south-western and southern boundaries of the hospital. However, the proposed buffer width of 10 m on the western and south-western boundary is considered insufficient to prevent land use conflict risk should intensification of agricultural production occur on the adjoining land. 		<p>HI notes and agrees with the comments of DPI Agriculture with respect to the implementation and maintenance of well vegetated buffers to minimise conflicts arising around the proposed hospital and its users and standard agricultural practices.</p> <p>Additional information on the determination of the proposed vegetated buffers is attached in a further assessment prepared by Tim Fitzroy and Associates (Refer Appendix K).</p> <p>With regard to the neighbouring property to the west which is currently fallow, the proposed development incorporates a 10 m wide vegetated buffer along the western and south-western boundary coupled with a carpark, a service yard and ambulance bay prior to the hospital to ensure protection should the land be farmed in the future. The development has been designed as such so that outdoor use areas for staff, patients and visitors are focussed on the northern side of the hospital. The building therefore provides an additional shield to those described above to agricultural activities.</p> <p>The proposed location of the service road within the campus master plan allows the 10 m western landscape buffer to be expanded if future changes to adjacent agricultural land uses occur and the car park areas, on the campus, are redeveloped in the future. The potential expansion of the buffer is shown in a drawing attached to Appendix K.</p>



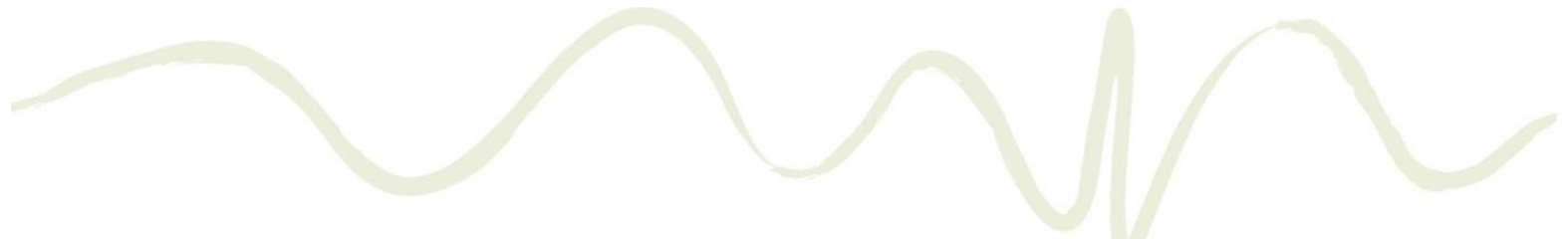
Agency	Issue/Comment/Recommendation	SEAR	Response
	<i>Recommendation</i> <ul style="list-style-type: none"> The hospital design should factor-in possible changes in land use (intensification of use) on the block of land on the western boundary of the hospital site. 		Noted. Refer to comments directly above, additional assessment and drawing provided by Tim Fitzroy and Associates in Appendix K .
Water NSW	<i>Comment</i> <ul style="list-style-type: none"> The subject site will not impact on any WaterNSW land, assets or infrastructure, and as such we have no comment or particular requirements. 		Noted.
NSW Environmental Protection Authority	<i>General Comments</i> <ul style="list-style-type: none"> The EPA does not review or endorse environmental management plans or the like for reasons of maintaining regulatory 'arm's length'. Consequently, the EPA has not reviewed any environmental management plan forming part of or referred to in the Environmental Impact Statement. The EPA notes the close proximity of Kingscliff farmland, urban and residential areas, Kingscliff Community Health Centre and the North Coast TAFE — Kingscliff Campus. 	N/A	Noted.
	Noise and vibration <i>Comments</i> <ul style="list-style-type: none"> The proponent should ensure that background noise monitoring and subsequent assessment of demolition/ construction and operational noise impacts is undertaken in accordance with the guidance material provided in the EPA's Noise Policy for Industry (NPI), published in October 2017. 	11 (Concept Proposal) 4 (Stage 1 works)	Noted and agreed.



Agency	Issue/Comment/Recommendation	SEAR	Response
	<ul style="list-style-type: none"> The EPA emphasises that as background noise monitoring is fundamental to proper noise impact assessment, the proponent should ensure that any such monitoring is consistent with guidance provided in NPI Fact Sheets A and B. 		Noted and agreed.
	<ul style="list-style-type: none"> Implementation of all reasonable and practicable mitigation measures for all works should occur to ensure that any adverse noise and vibration generating activities are minimised when NML's and vibration levels cannot be met due to safety or space constraints. 		Noted and agreed.
	<p><i>Recommendation</i></p> <ul style="list-style-type: none"> The EPA emphasises that demolition, site preparation, bulk earthworks, construction and construction related activities should be undertaken during the recommended standard construction hours, being: <ul style="list-style-type: none"> 7.00 am to 6.00 pm Monday to Friday; 8.00 am to 1.00 pm Saturday, and No work on Sundays or gazetted public holidays. 		Noted and agreed. In response to submissions, proposed construction hours on Saturdays from 8.00 am to 4.00 pm have been revised to 8.00 am to 1.00 pm. This is in line with standard construction hours and the EPA recommendation.
	<p><i>Recommendation</i></p> <ul style="list-style-type: none"> The proponent be required to ensure construction vehicles (including concrete agitator trucks) involved in demolition, site preparation, bulk earthworks, construction and construction-related activities do not arrive at the Project Site or in surrounding residential precincts outside approved construction hours. 		Noted and agreed. Management of construction related traffic noise will be carried out in accordance with Section 2.2 of the Preliminary CNVMP. A comprehensive CNVMP will be developed by the engaged contractor to ensure that traffic noise impacts on residential receivers is minimised.
	<p><i>Recommendation</i></p>		Noted and agreed. The SSD (ref:20181017 SVM.0001.Rep) includes a preliminary



Agency	Issue/Comment/Recommendation	SEAR	Response
	<ul style="list-style-type: none">■ A comprehensive Construction Noise Vibration Management Plan (CNVMP) should be prepared prior to the commencement of any works.		CNVMP in Appendix D. A comprehensive plan will be prepared by the engaged contractor prior to the commencement of works and will address the relevant applicable criteria.
	Dust control and management <i>Recommendation</i> <ul style="list-style-type: none">■ The proponent be required to:<ul style="list-style-type: none">– Minimise dust emissions on the site; and– Prevent dust emissions from the site.	5 (Stage 1 Works)	Noted and agreed. Dust control and management measures, included as part of a comprehensive Construction Environmental Management Plan, would be implemented to appropriately minimise and manage dust during construction.
	Sediment control <i>Recommendation</i> <ul style="list-style-type: none">■ Managing Urban Stormwater Soils and Construction, 4th Edition published by Landcom (the so-called 'Blue Book') provides guidance material for achieving effective sediment control on construction sites. The proponent should implement all such practicable and reasonable measures as may be necessary to prevent water pollution in the course of developing the site.■ The EPA emphasises the importance of:<ul style="list-style-type: none">– Not commencing demolition, site preparation, bulk earthworks, construction and construction related activities until appropriate and effective sediment controls are in place; and– Daily inspection of sediment controls which is fundamental to ensuring timely maintenance and repair of those controls.	5 (Stage 1 Works)	Noted and agreed. Sedimentation controls will be installed and managed in accordance with the NSW Landcom Blue Book.



Agency	Issue/Comment/Recommendation	SEAR	Response
	<p>Waste control and management (general)</p> <p><i>Comment</i></p> <ul style="list-style-type: none"> The proponent should manage waste in accordance with the waste management hierarchy. The waste hierarchy, established under the <i>Waste Avoidance and Resource Recovery Act 2001</i>, is one that ensures that resource management options are considered against relevant priorities. 	<p>20 (Concept Proposal)</p> <p>12 (stage 1 works)</p>	<p>Noted. Waste management practices will align with waste management hierarchy under the WARR Act. Refer TSA's RTS Addenda Report at Appendix O.</p>
	<ul style="list-style-type: none"> The EPA further anticipates that, without proper site controls and management, mud and waste may be tracked off the site during the course of the Project. 		<p>Noted and agreed. Proper site controls and management, including a Construction Environmental Management Plan will be prepared.</p>
	<p><i>Recommendation</i></p> <ul style="list-style-type: none"> The proponent be required to identify and implement practicable and reasonable opportunities for the reuse and recycling of waste, including food waste. <p><i>Recommendation</i></p> <ul style="list-style-type: none"> The proponent be required to ensure that: <ul style="list-style-type: none"> All waste generated during the Project is assessed, classified and managed in accordance with the EPA "Waste Classification Guidelines Part 1: Classifying Waste", November 2014 and the 2016 Addendum thereto; the body of any vehicle or trailer, used to transport waste or excavation spoil from the premises, is covered before leaving the premises to prevent any spill or escape of any dust, waste, or spoil from the vehicle or trailer; and mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body 		<p>Noted and agreed. Waste will be managed in accordance with the recommendations of the preliminary Construction Waste Management Plan prepared by TSA Management and a detailed Construction Waste Management Plan as part of the CEMP will be prepared prior to the commencement of works. The Waste Management Plan will be prepared in accordance with the EPA's "Waste Classification Guidelines (2008)" and the <i>Protection of the Environment Operations Act 1997</i>. Resource management hierarchy principles would also be followed and working areas would be maintained, kept free of rubbish and cleaned up at the end of each working day.</p>



Agency	Issue/Comment/Recommendation	SEAR	Response
	of any vehicle, trailer or motorised plant leaving the site, is removed before the vehicle, trailer or motorised plant leaves the premises.		
	<p>Waste control and management (concrete and concrete rinse water)</p> <p><i>Comment</i></p> <ul style="list-style-type: none"> ■ The proponent should ensure that concrete waste and rinse water is not disposed of on the Project Site and instead that: <ul style="list-style-type: none"> – Waste concrete is either returned in the agitator trucks to the supplier or directed to a dedicated watertight skip protected from the entry of precipitation; and – Concrete rinse water is directed to a dedicated watertight skip protected from the entry of precipitation or a suitable water treatment plant. <p><i>Recommendation</i></p> <ul style="list-style-type: none"> ■ The proponent be required to ensure that concrete waste and rinse water are: <ul style="list-style-type: none"> – Not disposed of on the development site; and – Prevented from entering waters, including any natural or artificial watercourse. 	12 (Stage 1 works)	Noted and agreed. All waste, including concrete, will be disposed of in strict compliance with the applicable Waste Management Guidelines for Health Facilities and EPA guidelines. Refer TSA's RTS Addenda Report at Appendix O .
	<p>Waste management (clinical and related waste)</p> <p><i>Recommendation</i></p> <ul style="list-style-type: none"> ■ The proponent be required to properly classify and manage clinical and related waste in accordance with the EPA's Waste Classification Guidelines. <p><i>Recommendation</i></p>	20 (Concept Proposal)	Noted. Operational waste (clinical and other waste) will be described and assessed as part of the Stage 2 SSDA.



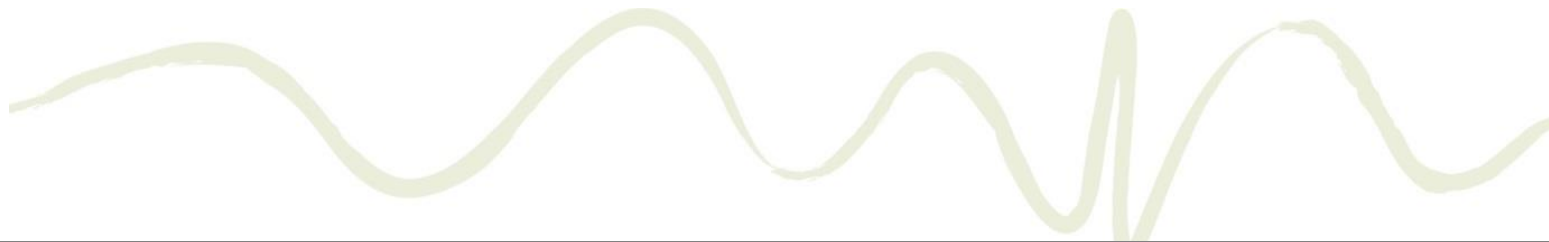
Agency	Issue/Comment/Recommendation	SEAR	Response
	<ul style="list-style-type: none"> The proponent be required to ensure that the occupier of the hospital prepares and implements a waste management plan, in respect of clinical and related waste generated at the development site in accordance with NSW Health policy directive 2017 026 titled "Clinical and Related Waste Management for Health Services", dated August 2017. 		
	<p>Underground Petroleum Storage System <i>Recommendation</i></p> <ul style="list-style-type: none"> The proponent be required to design, install and operate any underground petroleum storage system in accordance with the requirements of the Protection of the Environment Operations (Underground Petroleum Storage System) Regulation 2014. 	23 (Concept Proposal)	<p>Noted and agreed.</p> <p>Our (ARUP) documentation has been updated to include the appropriate requirements (refer Appendix P).</p>
	<p>Radiation management <i>Comments</i> <i>Recommendation</i></p> <ul style="list-style-type: none"> The proponent be required to ensure shielding of 'regulated material', including diagnostic imaging equipment is assessed and calculated in accordance with the EPA's guidance material provided in "Radiation Guideline 7 - Radiation shielding design assessment and verification requirements". <p><i>Recommendation</i></p> <ul style="list-style-type: none"> The proponent be required to apply for and obtain a 'radiation management licence' in respect of 'regulated material' at the new facilities and the management and handling of any waste containing radioactive material. 	N/A	<p>Noted and agreed. These recommendations relate to the operation of the hospital and will be addressed further in the Stage 2 SSD submission. All relevant licencing requirements will be complied with.</p>



Agency	Issue/Comment/Recommendation	SEAR	Response
	A late submission was received by the EPA on Thursday 24 January 2019. The issues raised in the late submission relate to contamination. The submission makes recommendations to DPE relating to contamination. These recommendations are currently being reviewed by HI and its consultants and a response will be provided to DPE as soon as possible.		
Government Architect NSW (GA NSW)	<ul style="list-style-type: none">Further consideration of the visibility and urban impact of the hospital precinct at both local and regional level.		<p>Noted. Health Infrastructure acknowledges the prominent location and visibility of the site and the need for the design of the hospital to have careful regard to the potential for placemaking as part of the regional context whilst reducing visual impact on surrounding neighbourhoods.</p> <p>The visual impact of the planning envelope has been further considered, by reducing the upper level volume to minimise visual impact from surrounding areas (refer to drawing AR-SKE-50-501).</p> <p>In parallel with further developments in clinical planning, the building form is being designed below the maximum area (GFA) capacity afforded by the proposed maximum planning envelope, and further articulated to ameliorate the visible appearance of bulk and scale. Refer to drawing AR-SKE-51-003 for an indicative outline of the potential building form.</p> <p>This articulation will be enhanced through detailed façade design in consultation with GANSW and will form part of the Stage 2 SSDA.</p> <p>A more detailed response to visual and urban impact of the development is provided in the</p>



Agency	Issue/Comment/Recommendation	SEAR	Response
			Architectural and Urban Design Response to Submissions Report at Appendix D .
	<ul style="list-style-type: none">■ Prepare landscape strategies, including:<ul style="list-style-type: none">– A ground level plan that identifies and prioritises a hierarchy of open space; and– The Cudgen Road setback zone as an amenity for the community, workers and visitors alike.		<p>Landscape strategies have been developed including a Landscape Zonal Plan and are included as part of the Architectural and Urban Design Response to Submission Report.</p> <p>The Zonal Plan identifies areas of open space that are prioritised within a hierarchy as:</p> <ol style="list-style-type: none">1. Retained, undisturbed forest;2. Low maintenance native landscape and buffer planting;3. Hospital landscape;4. Farm landscape; and5. Vegetation buffers. <p>The hospital landscape zone further priorities open space to include gardens, breakout spaces, open lawns, plazas and feature entries. Further details of these areas will be developed in consultation with GA NSW and included as part of the Stage 2 SSDA.</p> <p>Details of the Cudgen Road setback can be found within the Landscape Zonal Plan. The western portion of the setback is proposed as a 30 m vegetated buffer as required by the LUCRA assessment. The eastern portion is proposed to retain the existing vegetation and augment to aid in wayfinding and placemaking strategies while reducing visual impact on surrounding areas. The central section is proposed as “Hospital Landscape”</p>



Agency	Issue/Comment/Recommendation	SEAR	Response
			which, as noted above, are uses for public and community amenity.
	<ul style="list-style-type: none">■ Review vehicle and pedestrian circulation and access to address:<ul style="list-style-type: none">– A coherent and connected street network that creates a framework for future development;– Priority given to pedestrian amenity; and– Accommodates multiple modes including pedestrian, bicycle and public transport movements.		<p>Vehicle and pedestrian circulation and access has been reviewed in parallel with the development of the landscape strategies noted above.</p> <p>The street network is designed to be coherent using the following framework (refer to drawing AR-SKE-10-007):</p> <ul style="list-style-type: none">– Separation of service and ambulance traffic flows to the north service road using dedicated site entrances A and D;– Public traffic flows utilise the main entry (supported by intuitive wayfinding strategies) to the main hospital street that runs east-west along the site;– A single decision point at the main hospital entrance to direct public flows either to the west, for Emergency visitors, or to the east for ambulatory and day patients; and– The main hospital street can be extended east to accommodate a future connected campus structure. <p>Priority is given to pedestrians as described in the Landscape Pathway Network drawing:</p> <ul style="list-style-type: none">– Main pedestrian route from site entry (public bus stop) to hospital entry;– Secondary pedestrian route along main hospital street;



Agency	Issue/Comment/Recommendation	SEAR	Response
			<ul style="list-style-type: none">- Dedicated pedestrian route running east-west through the site connecting all carparks and hospital entrances;- Connector pedestrian paths connecting the above routes; and- Informal pedestrian trail along the landscaped northern part of the site. <p>Multiple modes of transport are accommodated as described in the Landscape Pathway Network drawing:</p> <ul style="list-style-type: none">- Integration of bus stop; and- Cycle routes.
	<ul style="list-style-type: none">■ Proposed engagement with the GA NSW, should occur at the following design stages:<ul style="list-style-type: none">- Site concept plan, including the original concept options as well as options evaluation and the rationale for the preferred envelope option;- Concept plan for the hospital; and- Schematic design, including sections and elevations.		Noted and agreed.
	<ul style="list-style-type: none">■ Further engagement and consultation with the local Aboriginal community to incorporate site specific histories and narratives into the design as it develops.		Noted and agreed. Ongoing engagement and consultation with the local Aboriginal community will occur throughout the Project. The Community Reference Panel also includes members of the Aboriginal community. This Panel is supporting the Project through the planning and design phases.



Agency	Issue/Comment/Recommendation	SEAR	Response
	<ul style="list-style-type: none"> A brief report which outlines a clear response to all issues raised by the SDRP. 		<p>Noted and agreed. A more detailed response to the issues raised by the SDRP is provided in the Architectural and Urban Design Response to Submissions Report at Appendix D. A brief report outlining the design response to all issues raised by the SDRP will be provided prior to the SDRP presentation in February.</p>
NSW Office of Environment and Heritage	<p>Biodiversity Recommendations</p> <ul style="list-style-type: none"> The Biodiversity Development Assessment Report (BDAR) and Biodiversity Assessment Method (BAM) assessment be revised to address the issues identified in Attachment 1 Appendix 1 to this letter, and the amended BAM assessment and revised BDAR submitted to the OEH for review. This may occur as part of the Response to Submissions Report. 	<p>19 (Concept Proposal) 8 (Stage 1 Works)</p>	<ul style="list-style-type: none"> The BDAR has been amended and updated to address OEH's comments provided in Appendix 1 of the OEH submission. The BDAR has also been peer reviewed by Cumberland Ecology to ensure all issues have been addressed. Responses have also been provided in an addenda report which contains specific responses to the Appendix items. The updated BDAR and peer review is attached as Appendix E.
	<ul style="list-style-type: none"> Prescribed impacts must be better described and the measures to avoid and mitigate the impacts must be demonstrated in the revised BDAR. 		<ul style="list-style-type: none"> Additional information regarding prescribed impacts has been provided in Section 3.2 of the revised BDAR (refer Appendix E).
	<ul style="list-style-type: none"> The OEH should be provided with an opportunity to review the Biodiversity Management Plan and its sub plans. 		<ul style="list-style-type: none"> The Biodiversity Management Plan and its sub plans will be provided to the OEH for review and comment prior to being finalised.
	<ul style="list-style-type: none"> The areas of retained vegetation in the north of the development site that are coastal wetlands under the 		<ul style="list-style-type: none"> The long-term management of the vegetation on the site has not been



Agency	Issue/Comment/Recommendation	SEAR	Response
	Coastal Management SEPP be appropriately rehabilitated and protected in perpetuity. This may include establishment of a Biodiversity Stewardship site, zoning for environmental conservation, and/or the preparation and implementation of a Vegetation Management Plan.		determined at this time. The Stage 2 SSDA will include a comprehensive vegetation management plan.
	Bushfire <i>Recommendations</i>	18 and 19 (Concept Proposal)	
	<ul style="list-style-type: none"> Should a greater Bushfire Asset Protection Zone (APZ) be required, or if there is inadequate space for the APZ on the subject site without the need for further vegetation removal or modification, then the OEH advises that the BDAR would need to be revised and resubmitted to fully consider the impacts on biodiversity values. 		Noted. There is sufficient space for the APZ on the subject site without the need for further vegetation removal or modification. No revision of the BDAR is required on this basis.
	Aboriginal Cultural Heritage <i>Comment</i> The assessment was undertaken to identify, describe and document Aboriginal cultural heritage values within the Project area was undertaken in consultation with Aboriginal people in accordance with the SEARs. The assessment did not identify any Aboriginal cultural heritage values within the study area and concluded that the proposed activity should proceed guided by four precautionary recommendations. OEH supports this approach.	10 (Concept Proposal) 9 (Stage 1 Works)	Noted and agreed.
	Flood Risk Assessment <i>Comment</i>	17 (Concept Proposal)	Noted and agreed.



Agency	Issue/Comment/Recommendation	SEAR	Response
	<ul style="list-style-type: none">■ The operational parts of the hospital site are located well above the Probable Maximum Flood (PMF) level.■ The assessment of access to the proposed hospital site demonstrates that the hospital site has:<ul style="list-style-type: none">– Access points to the hospital site/ lot that are above the PMF flood event;– Good access to populated areas in the 100-year ARI (Average Recurrence Interval) flood event to the south; and– Poor access to populated areas to the north with main roads being cut in 20-year ARI event.■ Overall, the site is considered to be very satisfactory from a flood perspective as the operational portion of the hospital site is located above the PMF level as it meets the objectives and criteria of the NSW Floodplain Development Manual.■ There is also more than adequate freeboard so that future increases due to climate change will not impact the operational areas of the complex.■ Although the access to the north is flood affected, this is an issue that would be present for any development site chosen and the hospital will have access to a network of unaffected roads to the south.		
	<p><i>Recommendation</i></p> <ul style="list-style-type: none">■ It is likely that the dry-stone walls mentioned above would reach the threshold of local significance. It would be preferable to retain these walls as they represent a significant phase of the site's usage and social history of the region.■ A condition should be included requiring the applicant liaise with Tweed Shire Council on how to best retain	N/A	The Historical Heritage Assessment indicates that based on the concept design, Walls 1 and 3 may be impacted because of road and infrastructure works. Wall 4 will be completely impacted as it is within the development footprint. The Historical Heritage Assessment recommends opportunities to further minimise impacts to the remaining four dry-stone walls



Agency	Issue/Comment/Recommendation	SEAR	Response
	<p>and interpret these elements with the proposed development.</p> <ul style="list-style-type: none"> ■ The creation of an Unexpected Finds Procedures must be conditioned to manage any historical archaeological works or relics are discovered during works. 		<p>which will be explored during future detailed design stages.</p> <p>NSW Health Infrastructure has provided a commitment to include practical and effective interpretation of the dry-stone walls and that this will take place during future design stages of the Project. This will include consultation with Tweed Shire Council as recommended.</p> <p>The need to create an Unexpected Finds Procedures is noted and agreed with and included in the proposed mitigation measures.</p> <p>Further discussion on these matters can be found in the Aboriginal Heritage and European Heritage Response to Submissions Report attached as Appendix H.</p>
NSW Rural Fire Service	<p><i>Recommendation</i></p> <ul style="list-style-type: none"> ■ The development proposal is to comply with the Master Plan-Concept Plan, prepared by STH Bates Smart for TSA Management numbered AR-SKE-10-006 revision 4 dated 19 September 2018. 	18 (Concept Proposal)	It should be noted that the master plan has been updated (refer Appendix B and Section 5 for further detail). The proposal remains consistent with the principles of 'Planning for Bush Fire Protection 2006'.
	<ul style="list-style-type: none"> ■ At commencement of physical site works associated with Stage 1 Early/ Enabling Works, the tree line as identified in the Master Plan-Concept plan shall be surveyed and physically delineated using mesh banner fencing or similar. 		Noted and agreed.
	<ul style="list-style-type: none"> ■ At commencement of physical site works associated with Stage 1 Early/ Enabling Works, the proposed APZ and construction area as identified in the Master Plan-Concept Plan shall be managed as an inner protection area (IPA) as outlined within section 4.1.3 		Noted and agreed.



Agency	Issue/Comment/Recommendation	SEAR	Response
	and Appendix 5 of 'Planning for Bush Fire Protection 2006' and the NSW Rural Fire Service's document 'Standards for asset protection zones'.		
NSW Roads and Maritime Services	<p><i>Comment</i></p> <ul style="list-style-type: none"> ■ Roads and Maritime considers that that the 'baseline' impact assessment in regard to traffic is reasonable and the predictions of impact are robust and conservative with suitable sensitivity testing. ■ The proposal includes all reasonably practicable mitigation options in regard to traffic. ■ The assessed impact is considered acceptable within the policy context of Roads and Maritime as the Traffic Impact Assessment (TIA) has been prepared in accordance with relevant Austroads Guidelines and the RTA Guide to Traffic Generating Developments 2002. ■ The TIA has identified road network upgrades that are required over the ten-year design horizon to 2033 to mitigate the impact of the development. 	7 (Concept Proposal) 3 (Stage 1 Works)	Noted and agreed.
	<p><i>Recommendations</i></p> <p>Roads and Maritime has identified the need for additional work, including:</p> <ul style="list-style-type: none"> ■ The developer shall enter into a Works Authorisation Deed (WAD) with Roads and Maritime for the traffic signal infrastructure works and the local and classified road network. The developer will be responsible for all costs associated with the works and administration for the WAD. ■ The developer shall demonstrate that the mid-block pedestrian traffic signals on Cudgen Road satisfy the 	7 (Concept Proposal) 3 (Stage 1 Works)	<p>Noted. These requirements would form part of the Stage 2 SSDA.</p> <p>For the full response, refer to Bitzios Consulting's EIS Response to Submissions – Traffic and Transport Report attached as Appendix N.</p>



Agency	Issue/Comment/Recommendation	SEAR	Response
	<p>warrants as set out in Roads and Maritime (formerly RTA) Traffic Signal Design, Section 2 – WARRANTS.</p> <ul style="list-style-type: none"> ■ The TIA identifies a 'Way Finding Signage' scheme is required to direct traffic from the Pacific Highway to the Tweed Valley Hospital. Any signposting plan shall be prepared in consultation with Roads and Maritime to ensure it meets the requirements of the Service Signposting guidelines. All costs associated with the design, manufacture and installation of these signs is the responsibility of the developer. 		
Transport for NSW	<p>Bus Services <i>Recommendation</i></p> <ul style="list-style-type: none"> ■ The proponent should continue ongoing consultation with TfNSW and Surfside. 	7 (Concept Proposal)	Noted and agreed.
	<p>Green Travel Plan <i>Recommendation</i></p> <ul style="list-style-type: none"> ■ Consideration of the number of public and active transport trips produced by the development if the desired mode share set by the GTP is reached should be included in the TIA. 	7 (Concept Proposal)	<p>Health Infrastructure has initiated a Transport, Access and Parking (TAP) Working Group to develop a range of transport strategies and measures that can be implemented throughout the design development, construction and operational phases of the Project. The TAP Working Group will incorporate a range of stakeholders including Council, transport operators, staff and community representatives.</p> <p>The TAP Working Group will be developing a Sustainable Transport Plan for the precinct, which will include a Green Travel Plan (GTP). While specific targets for public and active transport are yet to be determined for the GTP, it is expected that these would generally align with targets in TfNSW's "Regional NSW</p>



Agency	Issue/Comment/Recommendation	SEAR	Response
			<p>Services and Infrastructure Plan". This plan nominates public and active transport mode share targets for 2056, as follows:</p> <ul style="list-style-type: none">- Public Transport - 3% to 5%;- Walking - 4% to 8%; and- Cycling - 2% to 5%. <p>Further discussion can be found in the Bitzios Consulting's EIS Response to Submissions – Traffic and Transport letter at Appendix N.</p>
	<p>Bus Stop Design <i>Recommendation</i></p> <ul style="list-style-type: none">■ Detailed design of the bus stop and a site plan indicating the location of the bus stop and the lay-up zone should be provided in future design iterations and should comply with disability access standards/guidelines.	7 (Concept Proposal)	Noted.
	<p>Parking Provision</p> <ul style="list-style-type: none">■ The potential impacts on the on-street parking in surrounding streets should be considered, particularly Oxford Street and Cambridge Court.	7 (Concept Proposal)	<p>The TAP Working Group has recently been established and will include a detailed review of car parking demand, supply and operations. The working group will review potential impacts that the Project may have on the on-street parking supply (including on Oxford Street and Cambridge Court). The working group will investigate and develop strategies to mitigate on-street parking impacts. Key focus areas include:</p> <ul style="list-style-type: none">- Reviewing expected parking demands with consideration to the parking supply;- Developing a Green Travel Plan and a Transport Access Guide to encourage the use of alternate transport modes; and



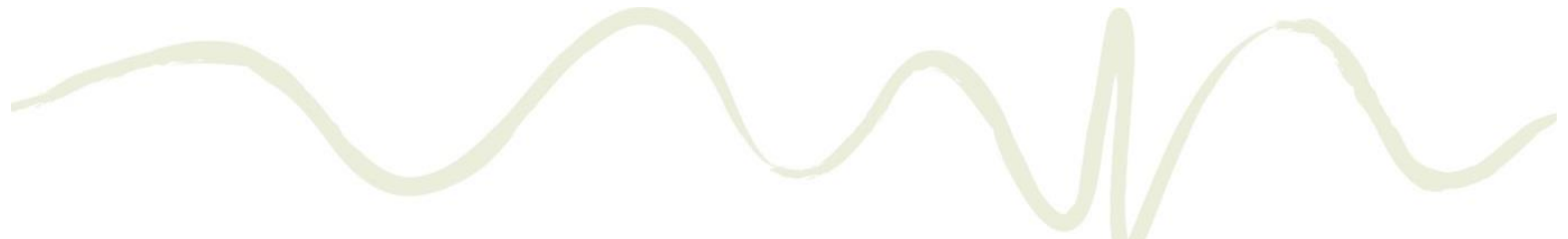
Agency	Issue/Comment/Recommendation	SEAR	Response
			<ul style="list-style-type: none">- Investigating the need for physical mitigation measures (e.g. signage and line marking, resident parking scheme). <p>This process will also involve consultation with other relevant stakeholders including Kingscliff TAFE, Council Officers, TRAC Kingscliff, Kingscliff High School, residents and local businesses. Mitigation and control measures likely to be considered include:</p> <ul style="list-style-type: none">- An on-site parking policy and management for the Tweed Valley Hospital;- Operational and management strategies for surrounding off-street car parking to restrict use to bona fide visitors and discourage use by staff, patients and visitors of the hospital; and- Review of car parking demands and revising the associated supply relative to this. <p>These strategies, which will be considered as part of the Stage 2 SSDA and associated Traffic Impact Assessment, will play an important role in managing and minimising the impacts of car parking in the surrounding area.</p> <p>Further discussion can be found in the Bitzios Consulting's EIS Response to Submissions – Traffic and Transport letter at Appendix N.</p>
	Design Traffic Modelling <i>Recommendation</i>	7 (Concept Proposal)	Further modelling undertaken by Health Infrastructure's advisors, Bitzios, confirms that the Tweed Coast Road four-lane upgrade and



Agency	Issue/Comment/Recommendation	SEAR	Response
	<ul style="list-style-type: none">The design year traffic modelling should consider a scenario in which Tweed Coast Road is not upgraded and consider measures which may be required should the local council not succeed in acquiring the funds for the upgrade.		<p>upgrade works to the Tweed Coast Road/ Cudgen Road intersection is identified within the Tweed Road Development Strategy 2017 and has a funding mechanism in place via the Section 7.11 Plan (formerly Section 94) No. 4 – Tweed Road Contribution Plan. Throughout the planning of these upgrades there has been a strong level of commitment from Council for the Tweed Coast Road four-lane upgrade proceeding. This is re-iterated in the RMS agency response.</p> <p>Regardless, a number of upgrades are proposed as part of the Project, irrespective of the Tweed Coast Road four-lane upgrade. These upgrades specifically cater for Project design traffic and to mitigate against peak hour impacts at the intersection. These would ensure that an appropriate level of service is provided to cater for the commencement of the hospital's operation.</p> <p>With consideration to the above, it is therefore not considered necessary to undertake additional design traffic modelling for this intersection. Furthermore, RMS supports the modelling approach and assessment already undertaken.</p> <p>For the full response, refer to Bitzios Consulting's EIS Response to Submissions – Traffic and Transport letter at Appendix N.</p>
	Active Transport <i>Recommendation</i>	7 (Concept Proposal)	Noted and agreed. The provision of appropriate and convenient staff and public cycle routes and bike storage, including end



Agency	Issue/Comment/Recommendation	SEAR	Response
	<ul style="list-style-type: none"> Future design iterations should illustrate the location of bicycle facilities in secure, convenient, accessible areas close to the main entries incorporating adequate lighting and passive surveillance and in accordance with Austroads guidelines and the relevant Australian Standards. 		<p>of trip facilities to be design developed and submitted as part of the Stage 2 SSDA.</p> <p>Future design iterations will include additional details on bicycle facilities (including location, overall provision and specific design) with consideration to the relevant Austroads guidelines and Australian Standards.</p>
	<p><i>Comment/Recommended Condition</i></p> <p>TAB B – Recommended Conditions of Approval</p> <p>TfNSW requests that DPE should include the following conditions if the proposed development is to be approved:</p> <p>Green Travel Plan</p> <p><i>Recommended Condition:</i></p> <ul style="list-style-type: none"> As part of the ongoing operation of the hospital, a detailed Green Travel Plan (GTP), which includes target mode shares for both staff and visitors to reduce the reliance on private vehicles, shall be prepared. The GTP must be implemented accordingly and updated annually. <p>Reason:</p> <p>To ensure sustainable transport outcomes and achieve the overall strategic planning objectives in the:</p> <ul style="list-style-type: none"> – Future Transport 2056 Strategy and supporting plans; – Sydney’s Bus Future 2013; – Sydney’s Cycling Future 2013; and – Sydney’s Walking Future 2013. 	7 (Concept Proposal)	<p>Noted and as discussed previously, a GTP will be prepared as part of the Stage 2 SSDA.</p> <p>The objectives of the Sydney based strategic planning future documents are not considered relevant to this regional project.</p>
Other			
Gold Coast Airport	<i>Comments</i>		<ul style="list-style-type: none"> Noted. Gold Coast Airport will have the ability to further comment on the proposal



Agency	Issue/Comment/Recommendation	SEAR	Response
	<ul style="list-style-type: none"> Gold Coast Airport request review and ability to provide comment of any information provided by Airservices Australia. 	22 (Concept Proposal)	and Airservices Australia's feedback as part of the Stage 2 of the SSDA.
	<ul style="list-style-type: none"> The document Appendix AA Aviation of the EIS does not include plans/ drawings of site assessments against relevant prescribed airspace surfaces. 		<ul style="list-style-type: none"> Design and development of the actual built form will be available as part of the Stage 2 SSDA. AviPro have determined that the proposal will not conflict with Obstacle Limitation Surfaces (OLS).
	<ul style="list-style-type: none"> Further and comprehensive consultation with the Gold Coast Airport Manager Operations and Standards should occur. 		<ul style="list-style-type: none"> Further consultation with Gold Coast Airport Manager Operations will be undertaken as part of the Stage 2 SSDA.
	<ul style="list-style-type: none"> The Aviation document makes reference to the Gold Coast Master Plan which is an indicative or explanatory document rather than technical and it would be expected the CASA mandated OLS would be referenced directly as opposed to NSW Health GL2018_010 Guidelines for NSW Hospital HLS in isolation. Despite an informal understanding the development sits below prescribed airspace a detailed assessment and drawing against the relevant protected surfaces has not been provided to GCA. 		<ul style="list-style-type: none"> Noted. A detailed assessment and drawing assessing the Proposal against the relevant guidelines, standards and codes will be provided as part of the Stage 2 SSDA. This will be referred to GCA as part of the SSDA process.
	<ul style="list-style-type: none"> CASA regulations and standards need to be considered in addition to NSW Hospital HLS guidelines as CASA ensures its regulatory framework is strictly adhered to regardless of other guidance material. 	22 (Concept Proposal)	<ul style="list-style-type: none"> AviPro have advised that CASA does not regulate helipads/ Helicopter Landing Sites (HLS). In addition, CASA has been consulted as part of the SSD and has advised that <i>'the planning and design considers relevant legislation and documentation for the design of a helipad'</i>. Further consultation with CASA will occur as part of the Stage 2 SSDA.



Agency	Issue/Comment/Recommendation	SEAR	Response
	<ul style="list-style-type: none">What was the scope of consultation with Airservices Australia? Did this include airspace, flight operations and air traffic control?		<ul style="list-style-type: none">Airservices Australia was consulted prior to lodgement of the SSDA and during the site selection process. Early advice received was to engage with GCA in the first instance. AirServices was again consulted at the SSDA stage. The Airservices Australia response to the exhibited SSDA raised no issues about the Concept Proposal or the consultation process. Further consultation with CASA will occur as part of the Stage 2 SSDA.
	<ul style="list-style-type: none">Key Issue: Noise and Vibration. The report should take into account there may be significant public concern regarding aircraft noise associated with helicopter operations, particularly arrival and departure paths to the north of the site. GCA understands communities in the vicinity have a high engagement and awareness regarding aircraft noise and noted public concern could be expected if helicopter impacts are not assessed and communicated in detail.	11 and 22 (Concept Proposal)	<ul style="list-style-type: none">Noise and vibration impacts were taken into account as part of the Stage 1 SSDA and associated EIS and specialist reports. The proposed rooftop HLS would likely result in less noise and disruption to the general public than is currently experienced as a result of the on-grade HLS at the current Tweed Hospital. The planned approach and departure paths avoid built-up areas to the greatest extent possible. It is anticipated that the overall number of noise complaints per helicopter movement will reduce when compared to those currently received at the Tweed Hospital. Tweed Valley Hospital is not being planned as a major trauma facility and helicopter movements are expected to be relatively infrequent and mostly during the day. The Noise and Vibration Assessment prepared by Acoustic Studio which provides a high-level consideration



Agency	Issue/Comment/Recommendation	SEAR	Response
			of operational noise impacts, including helicopter noise, confirms that this matter has been considered in the context of the proposal.
	<ul style="list-style-type: none"> What were the geographical and structural contexts of the UK study and were they comparable to conditions at the Tweed Valley Hospital site: rural vs built-up urban areas etc? 	22 (Concept Proposal)	<ul style="list-style-type: none"> UK Building Note 15-03: Hospital Helipads covers HLS across the full spectrum of hospital sites in the UK and is considered by AviPro to be a useful and relevant reference to Tweed Valley Hospital.
	<ul style="list-style-type: none"> Compliance and Standards: Should be noted that “grandfathering” applies to instances in which compliance with a CASA standard was historically unachievable or due to post implementation amendments to standards. A non-standard facility or component constructed as such will not automatically be grandfathered and rectification may be requested. 	22 (Concept Proposal)	<ul style="list-style-type: none"> Noted. AviPro have advised that CASA does not regulate helipads/ Helicopter Landing Sites. The key statement in this section is that “Standards set by NSW Ambulance were established to meet or exceed those requirements.” Tweed Valley Hospital will be such a case of meeting or exceeding all ICAO and CASA recommended standards and practices.
	<ul style="list-style-type: none"> Wind: Although BOM may not produce specific wind rose data for Gold Coast there are a number of platforms with available data that could be extrapolated and reviewed. 	22 (Concept Proposal)	<ul style="list-style-type: none"> Only the BOM produces historical records and data over 15 years of measurement. The BOM data is considered to be the most appropriate for this development.
TAFE NSW	<p><i>Comments</i></p> <ul style="list-style-type: none"> TAFE NSW is supportive in principle of the proposed new Tweed Valley Hospital. 		Noted.
	<ul style="list-style-type: none"> In response to the Tweed Valley Hospital SSDA, TAFE NSW commissioned Cardno Pty Ltd to undertake an independent peer review of the Traffic 	-	<ul style="list-style-type: none"> Noted additional consideration has been provided by Bitzios Consulting and is contained in its EIS Response to



Agency	Issue/Comment/Recommendation	SEAR	Response
	<p>Impact Assessment, prepared by Bitzios Consulting. The Cardno review has identified the following key items which require further consideration:</p> <ul style="list-style-type: none">- Intersection modelling of the Cudgen Road/ TAFE access to reflect actual driver behaviour, as well as network operation with regards to nearby roundabout performance- Clarification and further justification for the traffic generation rates adopted- Clarification that the proposed upgrades are suitable for the overall hospital and medical precinct (i.e. future proofing)- Car parking management and enforcement to ensure parking infiltration into the TAFE site does not occur. <p>The full Cardno report is attached at Attachment A [of the TAFE NSW submission].</p> <p>TAFE NSW looks forward to working with Health Infrastructure NSW to support further detailed planning to address the issues identified.</p>		<p>Submissions – Traffic and Transport letter at Appendix N. This report demonstrates that:</p> <ul style="list-style-type: none">- The methodology used for modelling the existing intersection arrangements best reflects actual driver behaviour and traffic movements. No significant impacts are expected on either intersection as a result of the operations of the other (refer Appendix N for further discussion on this issue).- The RMS Guide to Traffic Generating Developments was used to calculate the Project's peak hour traffic generation. Traffic generation rates nominated within the Guide to Traffic Generating Developments are based on historical traffic surveys and data analysis and utilisation of these rates is standard practice.- The TIA has been prepared with consideration to the Concept Proposal which is a new Level 5 Major Referral Hospital. Any subsequent stages (e.g. future hospital expansion or other medical services not included in the concept proposal) would be subject to a separate application(s) as required and would be related to works for potential future expansion of the facility.



Agency	Issue/Comment/Recommendation	SEAR	Response
			<ul style="list-style-type: none">- Refer to previous comments. The Transport, Access and Parking (TAP) Working Group has recently been established to review car parking demand, supply and operations. The working group will review impacts that the Project may have on the on-street parking supply and on nearby off-street car parks (including the Kingscliff TAFE car park). The working group will investigate and develop strategies to mitigate on-street parking impacts. A TAFE working group has also been established to collaborate on a multitude of agendas including parking.

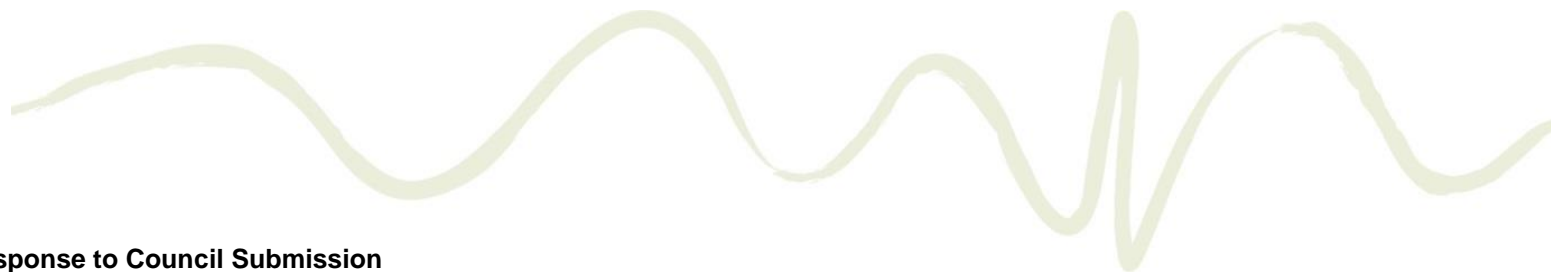


Table 4-2 Response to Council Submission

Agency	Issue	SEAR	Response
Local Government			
Tweed Shire Council First Submission Note that the adjacent column lists Council's position and technical staff recommendations. For full comments/detail refer to letter from Council.	<p><i>Comment</i></p> <p>The matter was reported to the Planning Committee Meeting on 6 December 2018 where it was resolved as follows:</p> <p><i>"That Council objects to the SEPP Application and State Significant Development Application and opposes the destruction of State Significant Farmland for hospital purposes on the grounds including but not limited to, that such development is prohibited when other feasible options exist (NCRP). Comments on the EIS by our professional staff are attached. Due to the very short exhibition period to examine such a complex 3000-page document, Council reserves the right to submit a supplementary report prior to the closing date for submissions should other issues subsequently emerge."</i></p>	-	Noted.
	<p>1. Water & Sewer Infrastructure Arrangements – an agreement regarding the connection obligations should be reached between Health Infrastructure and Tweed Shire Council before any approvals are issued:</p> <p><i>Recommendations</i></p>	13 and 15 (Concept Proposal)	Noted. Refer line items below.
	a) An agreement regarding water and sewer headworks financial contributions should be reached between Health Infrastructure and Tweed Shire Council before any water and sewer related approvals are issued;		Noted and agreed.
	b) A certificate of compliance under Chapter 6, Part 2, Division 5 of the <i>Water Management Act 2000</i> is to be		Noted and agreed.



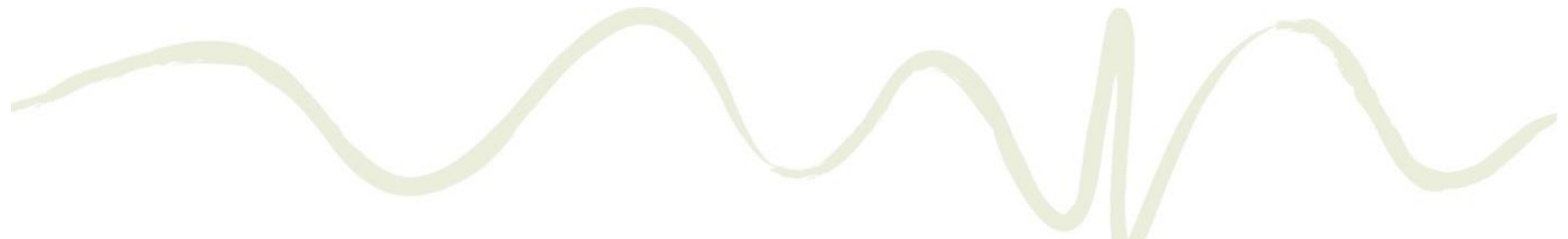
Agency	Issue	SEAR	Response
	obtained from Council to verify that the necessary requirements for the supply of water and sewerage to the development have been made with the Tweed Shire Council.		
	c) An application will need to be lodged with Council for any works required to connect to Council's water and sewerage systems (as the Water Authority), or where development is likely to disturb or impact upon existing water or sewer infrastructure.		Noted and agreed.
	d) An application will need to be lodged with Council (as the Water Authority) for a bulk water meter.		Noted and agreed.
	e) An application will need to be lodged with Council (as the Water Authority) will need to be lodged with Council to install/ operate an on-site sewerage management system (private pump station). A condition of the application would include a requirement for pumps to be limited to a maximum discharge of 36 L/s to Council's sewerage system.		Noted and agreed. Application to be completed and issued by project team upon further design development.
	f) An application will need to be lodged with Council (as the Water Authority) for approval to discharge Liquid Trade Waste to Council's sewerage system.		Noted and agreed. Application to be completed and issued by project team upon further design development.
	2. Road Connections– A Section 138 Application will need to be lodged with Council and discussion between Health Infrastructure as the applicant and Council needs to continue to ensure any hospital is serviced by a suitable road network with kerb and gutter and good public access opportunities.	7 (Concept Proposal)	Noted. Refer line items below.
	<i>Recommendations</i>		A Traffic and transport response to submissions has been provided at Appendix



Agency	Issue	SEAR	Response
	<p>g) Access A off Cudgen Road is to be modified to reflect the requirements of Council's Driveway Access Specifications and connect orthogonal to Cudgen Road in a similar configuration to the Byron Bay Hospital access from Ewingsdale Road.</p>		<p>N. The proposed access is ingress only and left in only (no right turns). Based on the specific vehicle requirement and consultation with emergency services, a higher order treatment was proposed in accordance with Austroads design and turn warrants. The access arrangements are proposed to remain as per the EIS submission.</p> <p>Further to the above, the following is noted (refer Appendix N for further details):</p> <ul style="list-style-type: none">■ Access A is now proposed as part of Stage 1 Early Works;■ the design of Access A has been amended to address safety concerns. The amended design notes that RMS approved pedestrian fencing is to be installed adjacent to the ancillary lane to ensure that pedestrians cross at the pram ramp, appropriate pedestrian cyclist chicanes to be installed to RMS/ Austroads requirements and signage to be installed on the shared path advising of the road ahead; and■ Council Technical Officers noted acceptance of the design with the abovementioned amendments. Council Technical Officers recommended approval of the access (with the abovementioned amendments) as documented in "Agenda – Ordinary Council Meeting Wednesday, 12 December 2018".



Agency	Issue	SEAR	Response
	<p>h) Access D - The design is to be updated to show a continuous connecting path of travel for pedestrians at the north/west leg of the roundabout on Cudgen Rd.</p>		<p>Noted and agreed.</p>
	<p>i) Before opening of the hospital, the intersection of Tweed Coast Road and Cudgen Road needs to be upgraded as follows:</p> <ul style="list-style-type: none">■ Addition of a 100 m southbound left-turn lane on Tweed Coast Road;■ Phase sequence change to allow the southbound left-turn to overlap with the westbound right-turn (i.e. possible with the provision of dedicated southbound left-turn lane);■ Lane discipline change for the two approach lanes on the south-eastern approach;■ Change of the left through lane to a through and right lane;■ Change of the right through and right lane to a right only lane;■ Extension of the south-eastern short departure lane from approximately 75 m to approximately 150 m;■ Extension of the northbound departure lane from approximately 85 m to approximately 200 m;■ Conversion of the north-western leg departure to a single lane (no physical changes. i.e. through provision of chevron line marking). With the lane discipline changes on the south-eastern approach, there is only one lane travelling through to the north-western departure lane; and■ Extension of the southbound departure lane to approximately 150 m.		<p>NSW Health Infrastructure is working closely with Council and RMS on the delivery (including extent of scope and timing requirements) of external traffic infrastructure commensurate with future planning for the surrounding road network. As recommended by the TIA submitted with the EIS, upgrade of the intersection is proposed as part of the concept proposal and to be undertaken in Stage 2, as discussed in Section 5.</p>



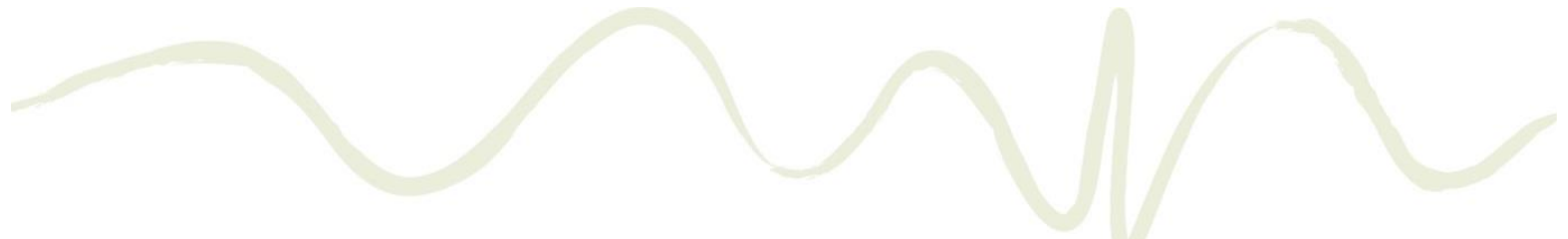
Agency	Issue	SEAR	Response
	j) Any works associated with the Tweed Coast Road/ Cudgen Road intersection should be commensurate with Council's ultimate plans for Tweed Coast Road.		NSW Health Infrastructure and the Project team have worked closely (and will continue to do so) with Council to ensure that any upgrade works are commensurate with Council's ultimate plans for Tweed Coast Road. For the full response, refer to Bitzios Consulting's traffic and transport response at Appendix N .
	3. Urban Design – The Master Plan process should adopt the provisions of the State Design Review Panel having regard to the character of the area. <i>Recommendations</i>	3 (Concept Proposal)	
	k) It is recommended that the findings of the SDRP are considered in the context of the sites master planning and to inform subsequent stages of the hospitals design and procurement.		Noted. A comprehensive response to the comments received from the GA NSW is contained in the Architectural and Urban Design Response at Appendix D. A further design response will be provided to the GA NSW ahead of Feb 2019 SDRP presentation.
	<i>Design Principles and design response</i> l) It is recommended that the master plan respond more closely to the locality character and the subtropical climatic context by: <ul style="list-style-type: none"> ■ Devising a suite of site specific urban design principles to inform subsequent stages of the hospital and sites design including principles of sustainable design; ■ Addressing the site's threshold position between the localities rural hinterland and urban settlement through site landscape, appropriate setbacks, 		Noted. The current application is for a Concept Proposal and Stage 1 early/enabling works for the Tweed Valley Hospital. The EIS, including Built Form and Urban Design Report and Visual Impact Assessment have considered the proposed planning envelopes in the context of a concept proposal and the broader setting. The principles outlined by Council will be addressed as part of the Stage 2 application.



Agency	Issue	SEAR	Response
	<p>building form, building materiality and visual analysis;</p> <ul style="list-style-type: none">■ Addressing the site's edge fronting Cudgen Road in terms of landscape, pedestrian access and visual amenity;■ Addressing the building envelope, height, form, mass and scale in the broader topographic context; and■ Addressing the site's interface with the low density urban interface to the east in terms of land use, site access, building form and visual impact.		
	<p><i>Building form</i></p> <p>m) It is recommended that the master plan explore additional building envelope typology configurations which represents a stronger landscape/ linear rather than compact tower response. This could include distributing the buildings bulk across the site reducing the overall height, mass and scale by stepping the building forms aimed at reducing building height at both the rural (western) and urban (eastern) thresholds and interfaces (see indicative diagrams).</p>		<p>The Stage 1 EIS, Appendix C, Section 4.2 Building Typology, describes the component parts of a hospital and at high level, describes a range of complex considerations that help define the final typological response. The EIS submission notes that the building typology has already been explored and the selected typology has been established as most advantageous and best positioned to support an efficient, modern and safe level 5 healthcare service. The options review study and preferred typology justification was presented to the Government Architect NSW on 3 October 2018.</p> <p>The design team is currently developing a building massing composition with the objective to ameliorate the mass and scale interface with the adjacent urban context. This includes expressing the hospital as a cluster of smaller forms. Further design development will be presented to the GA</p>



Agency	Issue	SEAR	Response
			<p>NSW at the next SDRP consultation session which once resolved will be submitted in the Stage 2 SSDA.</p> <p>This is further discussed in Section 5 (Changes to the Project) and the architectural and urban design response at Appendix D.</p>
	<p><i>Circulation and Movement</i></p> <p>n) It is recommended that the master plan more clearly articulate internal roads and streets which organise and structure the site's future building envelopes, vehicular circulation, car parking as well as clearly delineated pedestrian (shaded) and cycle movements across the site, open space and public domain areas. Similarly, a location for public transport access (bus stop) should be nominated and relate to the surrounding context (residential and TAFE). It is further noted that the location of the car parking areas, which dominate a substantial portion of the site's area are a substantial uncovered walking distance from the main hospital access points. Given the site's slope, there is good opportunity to locate car parking in building envelopes under croft areas and provide vertical circulation to access different hospital and health services.</p>		<p>This is addressed in the architectural and urban design response at Appendix D, including section 2.2.7 and responses provided to the GA NSW. The site access and internal road network design engineering justification has been provided with the submitted EIS and accompanying TIA. Further refinement of the campus layout has occurred (also discussed in Section 5). An indicative pedestrian pathway plan has been provided in Appendix B. Design provision of sheltered walkways providing access from the surface carparking to the hospital entrance will be included and documented in the Stage 2 SSD planning application submission.</p>
	<p><i>Future Stages</i></p> <p>o) It is recommended that the master plan more closely address future stages of the development and recognise the potential for a substantial mix of land uses including health and allied health services as well as a range of retail, community, and public</p>		<p>Noted. The submitted EIS and SSDA submission proposes a concept stage framework strategy for development of the campus, refer Appendix C in the EIS, section 5.4 p.65. This is expanded upon in the architectural and urban design response at Appendix D. Further development of the</p>



Agency	Issue	SEAR	Response
	domain which would also be used and relevant to the existing surrounding community.		master plan will occur and be submitted in the Stage 2 SSD.
	<p><i>Community consultation</i></p> <p>p) It is recommended that consultation on the site's master plan and building envelope / design options be undertaken with the local community prior to the submission of subsequent development applications.</p>		<p>As outlined in the EIS and Section 2 of this report, to date, extensive consultation of the master plan has taken place via the cross-government agency working group, Council Reference Group, Consumer Reference Panel, LHD clinical and staff forums.</p> <p>Consultation will continue through schematic and detailed design.</p>
	<p>4. Scenic Landscape – The site is highly visible and needs a broader assessment. Council can assist with GIS data.</p>	4 (Concept Proposal)	
	<p><i>Recommendations</i></p> <p>q) It is recommended that the VIA include impact assessment of affected views from highly trafficked and accessible public viewing locations with more distant, elevated or panoramic views, where the subject site falls within and impacts on the midground or background. TSC can provide GIS mapping information relating to key view sheds.</p>		<p>The Visual Impact Assessment (VIA) assessed the probable visual impacts of the Concept Proposal based on a maximum planning envelope for the Project, prior to detailed design and articulation of built form. The maximum planning envelope therefore represents a worst-case scenario and does not represent built form or actual massing.</p> <p>The VIA assessed the Concept Proposal from 10 view frames within the surrounding locality from a variety of directions, elevations and distances of approximately between 20 m to 650 m from the Project Site. This included the most exposed and elevated areas that look toward/ over the Project Site. The assessed view frames were selected and determined on the basis of being a reasonable representation of key view frames for both the public and private realm. As part of this, the scenic quality of the broader Cudgen district, including applicable key views identified in</p>
	<p>r) It is recommended that as part of the VIA the assessment that there is evidenced engagement with affected viewers of revised viewing locations, to consult on their visual quality values, and identify their preferences for specific visual elements as seen in the existing view and the conceptual view including the proposed development. This should comprise the following matters:</p>		



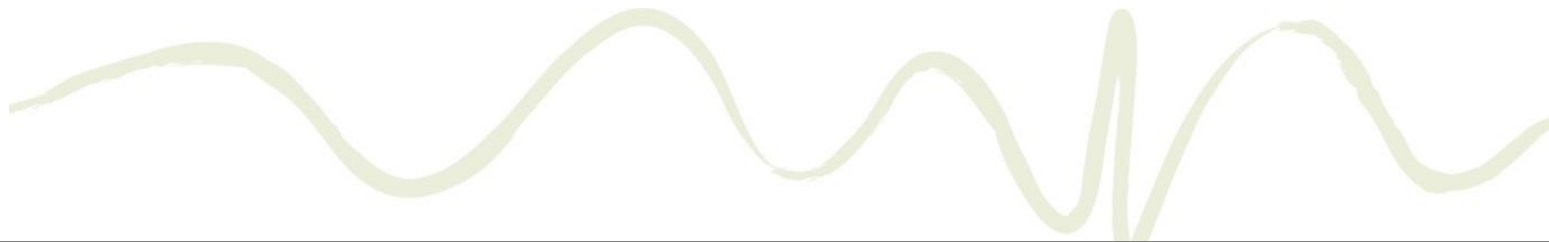
Agency	Issue	SEAR	Response
	<ul style="list-style-type: none">■ Information and discussion of the development site/ area and the nature of the proposal with affected landholders and community;■ Confirmation of which viewpoints are considered important and validation of their view sheds;■ Capture community values about scenic qualities – that is, the landscape features and visual elements that viewers prefer (like/ dislike);■ Provision of photomontages generated from each viewing point to facilitate an understanding and discussion of potential visual impacts of the proposed development; and■ Scope alternative designs and listen to and report on viewers concerns about visual impact and the extent to which they perceive the proposed mitigation measures will achieve their scenic quality objectives.		<p>the draft KLP were considered. Whilst impacts have been identified, the Proposal is considered reasonable on balance for reasons described in the EIS and VIA, and measures would be further developed and implemented at Stage 2 to minimise visual impact.</p> <p>The level of assessment and view frames considered in the VIA are considered appropriate in the context of the Concept Proposal and based on the extent of detail provided. This is limited to a maximum planning envelope, without detailed design being available or accounting for the reducing upper level densities as indicated in the EIS and concept plans. Approval of actual built form would be subject to merit assessment of the Stage 2 SSDA. 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.</p> <p>Key aspects of the design that influence visual impact are built form and massing and these will continue to be developed during the next design phase. Once complete, additional assessment, including photomontages and perspectives of the proposed development will be included as part of the stage 2 application. This would include a comprehensive Stage 2 VIA of the proposed built form.</p>



Agency	Issue	SEAR	Response
			<p>The established view frames in the VIA prepared for the Concept Proposal would be revisited as the design develops through schematic design, and where identified necessary, further views of significance be identified and included within the abovementioned subsequent VIA, which will be submitted with the SSD Stage 2 application.</p> <p>On this basis, the VIA for the Concept Proposal is considered to be acceptable and adequately assesses the Concept Proposal to inform the decision-making process for this stage, with further detailed assessment to form part of Stage 2.</p> <p>A comprehensive community engagement process is proposed as part of the Stage 2 SSD, which would include detailed consultation in relation to visual impact.</p> <p>Consultation activities will include:</p> <ul style="list-style-type: none">■ Concept Design and Schematic Design workshops with the Community Reference Panel;■ Concept Design Community Pop-Ups; and■ Targeted consultation with affected landowners reviewing direct impact based on location. <p>Consultation tools would include:</p> <ul style="list-style-type: none">■ Photomontages from identified viewpoints, relevant to affected landowners/ parties;



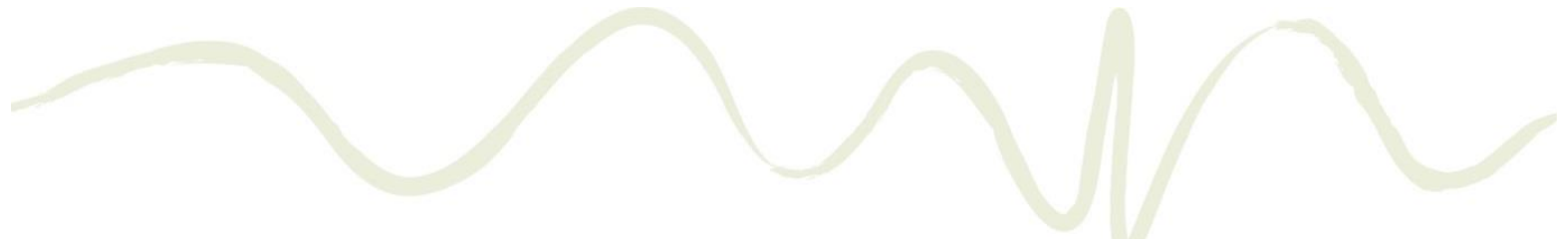
Agency	Issue	SEAR	Response
			<ul style="list-style-type: none">■ Fly through/ walkthrough; and■ Perspectives and photomontages from key public locations and viewpoints. <p>Feedback from the community and stakeholders received as part of this consultation will assist the architects/ designers in refining and considering design alternatives to mitigate visual impact.</p>
	5. Agricultural Value – additional information is needed on soil classification <i>Recommendations</i>	4 and 6 (Concept Proposal)	Refer line items below.
	s) It is recommended that a soil assessment including soil samples and classification against a recognised soil classification system to assess the value of soils across the site be required. In addition, any such assessment should validate the distinction that might exist between the soils on the top of the plateau and those on the surrounding escarpment.		<p>An additional agricultural assessment has been prepared by ARC Group in response to submissions, including DPI Agriculture. This report is attached as Appendix J. The report provides more detail on:</p> <ul style="list-style-type: none">■ Soil type;■ Impacts on the loss of SSF and associated loss of food production value; and■ Recommended mitigation measures to be undertaken as part of the Project. <p>Since submission of the EIS, additional geotechnical investigations including permeability testing have been undertaken (refer Appendix R).</p> <p>Additional soil classification assessment can be found in Appendix J which notes the distinction between the soils on the top of the plateau and those on the surrounding escarpment.</p>



Agency	Issue	SEAR	Response
			<p>The soil types on the majority of the cultivation on this site and the Cudgen Plateau (SSF region) are red to brown Kraznozems. These soil types are well suited to horticultural crop production for a broad range of crops.</p> <p>In terms of land capability classification, as developed by the NSW Soil Conservation Service: (https://www.lis.nsw.gov.au/agriculture/land-capability) the soils of the Cudgen Plateau would largely be classified as:</p> <p><i>Class 1: "Suitable for a wide range of agriculture. It may be regularly cultivated. There are few, if any constraints to production".</i></p> <p>In respect of 771 Cudgen Road the soils would be classed as class 1 to class 2:</p> <p><i>Class 2: "Suited to a wide range of horticulture in rotation with pastures. Several minor constraints may limit suitability for continuous cultivation. These include stony and shallow phases of soil, moderate erosion hazard and degradation of the soil surface."</i></p> <p>The soil at the site, particularly on the sloping blocks on the northern side of the property, has substantial amounts of surface rock present. Rock is also present on other paddocks within the property.</p> <p>Further detail of the soil types within the Cudgen plateau (SSF region) is available in Isbell RF (2016) "Australian Soil</p>



Agency	Issue	SEAR	Response
			<p>Classification' 2nd edition and at https://www.environment.nsw.gov.au/eSpade2WebApp.</p> <p>From the above website, the Cudgen Plateau (SSF region) and the property in question has been mapped as Kraznozem soils (refer to Appendix J)</p> <p>There is 7.02 ha of the site that is sloping from 6% to 17%. The sloping nature of these paddocks means they are prone to soil erosion and the farming of these paddocks is more difficult than the flat or moderately sloping balance of the property which is approximately 4.22 ha.</p> <p>HI also engaged Turf Design Studio to assess the existing landscape condition, and provide recommendations for ongoing management of the landscape. The report provides a range of options for the management of each landscape zone and also provides advice on the condition, volume and potential reuse of the topsoil on the site. This report is attached as part of Appendix J.</p>
	t) It is recommended that an assessment into appropriate setbacks and buffers between the site and surrounding agricultural uses be undertaken referencing the publication 'Living and Working in Rural Areas 2007'. The Assessment should clearly define setback requirements to ensure that legitimate agricultural activities are not impacted by construction of the hospital or ancillary development on the site, or future expansion of Kingscliff TAFE.		<p>The EIS includes a detailed assessment into appropriate setbacks and buffers between the site and surrounding agricultural uses. The publication 'Living and Working in Rural Areas 2007' has been referenced in this assessment. Appropriate setbacks and planted buffers have been identified to ensure that adjoining agricultural land would not be adversely impacted by development of the</p>



Agency	Issue	SEAR	Response
	<p>u) It is recommended that setbacks be imposed on the site to ensure that adjoining agricultural land will not be impacted by development of the site.</p>		<p>site. As outlined in the potential land use conflict response to submissions at Appendix K, the design/ siting of the development enables a future increase in the western buffer width should this be required as a result of intensification of the adjoining land use.</p>
	<p>6. Sustainable Agriculture –Council is requesting State funded offsets for the loss of any agricultural land and meaningful consultation with the local farmers in relation to the possible impacts with active farming pursuits and the setback requirements to avoid land use conflicts.</p> <p><i>Agricultural impacts</i></p> <p>The EIS should:</p> <ul style="list-style-type: none"> ■ Accurately quantify the loss of arable land, the associated loss of food production over the life of the Project and detail how these figures were determined; ■ Consult local growers to assist in determining the likely impacts of the proposal and potential mitigation options for offsetting the loss of 14 ha of State Significant Farmland and associated socio-economic impacts; and ■ Address the requirements of the SEARs including identifying options to minimise and mitigate adverse impacts on agricultural resources, including agricultural lands, enterprises and infrastructure at the local and regional level. 	<p>4 and 9 (Concept Proposal)</p>	<p>As outlined previously and in response to submissions from DPI Agriculture, an additional agricultural assessment has been prepared by ARC Group. This report and additional responses to potential land use conflict are provided at Appendix J and K respectively.</p> <p>The additional agricultural assessment by ARC provides more detail on:</p> <ul style="list-style-type: none"> ■ Soil type; ■ Impacts on the loss of SSF and associated loss of food production value; and ■ Recommended mitigation measures to be undertaken as part of the Project. <p>Overall:</p> <ul style="list-style-type: none"> ■ The Project Site is a small development area physically separated from other farmland and would not result in significant loss of arable land (approximately 12 ha); ■ The Project is for critical public infrastructure that was subject to a comprehensive site selection process; ■ A project specific SEPP applies; and



Agency	Issue	SEAR	Response
			<ul style="list-style-type: none"> A number of measures as detailed elsewhere in this Submissions Report can help to offset the loss of farmland.
	<p><i>Recommendations</i></p> <p>v) The State government develop and fund an agricultural support program to offset the impacts of the development including the loss of 14 ha of State Significant Farmland and the associated socioeconomic impacts.</p> <p>The support program could identify current farming issues that impact on viability and help local farmers to overcome existing production and market access issues, create pathways for farmers to supply the new hospital with fresh food, and support the use of currently underutilised State Significant Farmland using mechanisms not limited to incentives, education and technical support.</p>		<p>Section 4.4.1.4 outlines that the Department of Premier and Cabinet (DPC), with the support of the Tweed Valley Hospital Cross Agency Planning Committee, including Health Infrastructure, is currently pursuing a collaborative opportunity with relevant agencies, outside of the Project, to support the agricultural industry in the region.</p> <p>During operational commissioning, Northern NSW businesses will be supported through the Industry Capability Network in the same manner proposed for construction opportunities.</p>
	<p>7. Community Services – The application is lacking in detail in regard to accessibility, transport, public safety, on-site linkages and linkages external to the site, accommodation and housing, the relationship with other ancillary social service providers in the area and whether existing State social providers will relocate form Council's assets.</p> <p><i>Recommendations</i></p>	Various	
	<p><i>Accessibility, transport and Public safety</i></p> <p>w) It is recommended that the Department of Planning request additional information to clarify the considerations used in determining the impact as “low” and include demographic considerations,</p>		<p>Noted. Responses to submissions, including additional information, regarding socio-economic and traffic/parking considerations are provided at Appendix M and N respectively.</p>



Agency	Issue	SEAR	Response
	benefits to active and public transport linkages, accessible parking options for people with limited mobility.		
	<p><i>Public safety</i></p> <p>x) It is recommended that the Department of Planning request additional information to clarify how hospital related violence and anti-social behaviour associated with hospitals will be mitigated in relation to surrounding facilities.</p>		<p>Noted. The principles of CPTED in the development of the Concept Plan have been adopted to establish a safe and secure environment. The CPTED principles will continue to be followed as the design progresses to inform the Stage 2 SSDA. More details regarding strategy implementation can be found in the EIS Appendix D Built Form and Urban Design Report.</p> <p>A multi-disciplinary approach will be implemented to deter criminal behaviour through environmental design and the design of buildings and places. A high level of importance will also be placed on security and surveillance in the design of the proposal as part of the Stage 2 SSDA. It is considered that the proposed design measures will significantly reduce the risk of anti-social and criminal activity relative to the current hospital. The detailed design will focus on public surveillance, not providing opportunities for concealed criminal behaviour and addressing all other principles of crime prevention through environmental design.</p> <p>This objective will be reviewed through the course of schematic design which will be</p>



Agency	Issue	SEAR	Response
			submitted for approval as part of the SSD Stage 2 planning submission.
	<p><i>Accommodation and Housing</i></p> <p>y) It is recommended that the Department of Planning request additional information regarding the consideration for accommodation provisions on-site or linkages to affordable accommodation options for staff, patients, students and visitors in a high tourism zone.</p>		<p>This is addressed in the social and economic response at Appendix M. A survey undertaken of current hospital staff indicates that a clear majority drive to work from various localities and that the impact on housing requirements is considered minimal. A small amount of on-site accommodation will be provided as part of the Project for on-call clinical staff. It is also acknowledged that the Project will need to consider provision for patient and carer accommodation, located on or in proximity to the campus. The submitted EIS and master plan demonstrate capacity for potential future development and suitable zones for expansion and ancillary components, including “Allied Residential Accommodation” (also refer below response regarding ancillary services).</p> <p>A Workforce Strategy will be developed as part of the Stage 2 SSDA that will contemplate the future demand for key worker accommodation associated with the Tweed Valley Hospital.</p>
	<p><i>Ancillary Health and Social Services</i></p> <p>z) It is recommended that the Department of Planning request additional information regarding the consideration of ancillary health and social services on-site or linkages to these services in the vicinity.</p>		<p>The master plan for the site includes capacity for a range of ancillary health and social services. It is acknowledged that the Project will bring about potential opportunities, including provision of a range of retail offerings and services.</p>



Agency	Issue	SEAR	Response
			<p>The following categories of Service Partnership opportunities are proposed for collocation with the Tweed Valley Hospital.</p> <ul style="list-style-type: none"> ■ Retail and Amenity; ■ Education, Training and Research; ■ Childcare and Elder-Care; ■ Social Services and Community Facilities; ■ Consulting Services, Diagnostic Services and Wellness Centre; ■ Sub-Acute and Aged Care; and ■ Key Worker, Patient and Carer Accommodation. <p>Potential service partnership opportunities are currently being explored and will be further defined as part of the Stage 2 SSDA as the Project progresses.</p>
	<p>8. Ecology – the current proposal indicates three large sediment ponds hard up against the significant land to the north. A 50m buffer is normally required with the outer edge having some infrastructure.</p> <p><i>Recommendations</i></p>	19 (Concept Proposal) 8 (Stage 1 Works)	
	<p>aa) It is recommended that further information is requested, or conditions of consent are applied, to achieve consistency with Tweed DCP A19 as follows:</p> <ul style="list-style-type: none"> ■ An amended development footprint that achieves a 50 m ecological setback, to be managed as an ecological buffer, from the significant vegetation: <ul style="list-style-type: none"> – Overlap of APZ and sediment basin location with the ecological buffer may be acceptable if it can be demonstrated that the management 		<p>The matter of ecological buffers has been comprehensively addressed in Section 3.20.3. It is noted that the pursuant to Clause 11 of State Environmental Planning Policy (State and Regional Development) 2011 that development control plans do not apply to SSD. The determination and establishment of buffers from ecologically sensitive lands</p>



Agency	Issue	SEAR	Response
	<p>requirements and design are compatible with ecological buffer management;</p> <ul style="list-style-type: none"> - No more than the outer half of the ecological buffer is to be used for the above purpose. ■ Preparation and approval of a Habitat Management Plan for retained vegetation and ecological buffer. ■ Implementation of the Habitat Management Plan should commence prior to commencement of any physical works on the site. 		<p>needs to be considered on a case by case basis with regard to relevant guidelines.</p> <p>In addition to this, buffers and setbacks associated with SSD are determined through a Biodiversity Development Assessment Report (BDAR) which is considered and approved by NSW OEH.</p> <p>Details of mitigation and adaptive management measures are provided in the revised BDAR and biodiversity response to submissions (refer Appendix E). In addition, the BDAR has informed appropriate measures to be implemented on the basis of specific site and species requirements. The Project as proposed, including the proposed setback arrangement, is therefore justified and appropriate with regard to biodiversity impacts.</p> <p>Ongoing management of the retained vegetation will be included as part of the Biodiversity Management Plan (BMP) to be prepared for the management of the site. Timeframes for implementation of the management actions will be identified in the BMP.</p>
	<p>bb) That the department be satisfied that the information supplied adequately addresses the requirements of development in the Coastal Wetland Proximity Area prior to approval.</p>		<p>Noted. The EIS and additional information provided in this Submissions Report, including biodiversity and stormwater considerations (Appendix E and G), addresses the relevant matters and no significant impact is expected. Ongoing management of the retained vegetation will</p>



Agency	Issue	SEAR	Response
			be included as part of the Biodiversity Management Plan (BMP) to be prepared for the management of the site. Timeframes for implementation of the management actions will be identified in the BMP.
	cc) That the Biodiversity Management Plan and incorporated Water Quality Management Plan be prepared and approved prior to work commencing on-site.		Noted. See the information provided in Section 3.2 of the revised BDAR, and Greencap's response to the OEH submission regarding the same issue (Appendix E).
	dd) That the proposal seeks to zone the area of retained vegetation and ecological buffer to E2 under TLEP 2014.		<p>The long-term management of the vegetation on the site has not been determined at this time, however the recommendations of the BDAR include a Biodiversity Management Plan (BMP), which is to be developed and address long-term management of biodiversity, including vegetation. The BMP will inform the long-term management decision as part of the Stage 2 application.</p> <p>Rezoning of the retained vegetation is one of the options that has been put forward to HI but is not specifically proposed at this time given it is a deferred matter of the Tweed Local Environmental Plan 2014.</p> <p>This comment is noted and will be considered as part of the BMP. Refer to the updated BDAR and biodiversity response at Appendix E.</p>
	ee) Restoration under the Habitat Management Plan described above, and landscaping in the vicinity of the		Noted. This will be considered as part of the BMP.



Agency	Issue	SEAR	Response
	wetland should consider incorporating preferred koala food trees where appropriate.		
	ff) Any fencing should not limit connectivity through and within the site for koala and other fauna.		Agreed. Fencing to secure the site implemented through preliminary works included fauna crossing points installed at 50 m intervals to allow fauna connectivity.
	<p>9. Aboriginal Heritage <i>Recommendations</i></p> <p><i>Guidance for the assessment (Section 1.2 and other)</i></p> <p>gg) It is recommended that the Department of Planning and Environment (DPE) require that references should be updated to reference Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 guideline rather than the superseded draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC 2005) within the ACHAR and the assessment report be updated to ensure the current requirements have been met.</p>	10 (Concept Proposal) 9 (Stage 1 Works)	A response to submissions from a heritage perspective is provided at Appendix H . The assessment complies and ACHAR complies with the current Aboriginal cultural heritage guidelines for NSW. No further updates are required.
	<p><i>Heritage register searches (Section 6.0)</i></p> <p>hh) It is recommended that the Department of Planning and Environment (DPE) require that the search area be expanded to a minimum one-kilometre radius from the site.</p>		The Aboriginal Heritage Assessment was prepared in compliance with the current Aboriginal Heritage Guidelines in NSW. When preparing the assessment, including the background literature review to understand Aboriginal occupation and past land use, the broader local area and regional context were considered. This is represented in the assessment report.



Agency	Issue	SEAR	Response
	<p><i>The Burra Charter (Section 12)</i></p> <p>ii) It is recommended that the Department of Planning and Environment (DPE) require that the Section 12.4 be updated to reflect the significance from the perspective of Aboriginal people.</p>		<p>Aboriginal perspectives have been included following the consultation process as set out in the NSW Aboriginal Cultural Heritage Consultation guidelines. Information provided by Aboriginal representatives was included in the reporting process.</p>
	<p><i>Suggest Aboriginal Conditions</i></p> <p>jj) Possible conditions - Aboriginal Precautionary Approach</p> <ul style="list-style-type: none"> Should any Aboriginal object or cultural heritage (including human remains) be discovered all site works must cease immediately and the Tweed Byron Local Aboriginal Land Council (TBLALC) Aboriginal Sites Officer are to be notified (on 07 5536 1763). The find is to be reported to the Office of Environment and Heritage. No works or development may be undertaken until the required investigations have been completed and any permits or approvals obtained, where required, in accordance with the <i>National Parks and Wildlife Act 1974</i>. Any actions or recommendations of the Aboriginal Cultural Heritage Assessment undertaken in support of the application are to be followed and implemented. 		<p>The Aboriginal assessment report includes provision for four precautionary principles to be implemented for inductions and stop works procedures for unexpected finds. This is also supported by OEH.</p>
	<p>10. European Heritage – A more technical evaluation of the area is required</p>	N/A	<p>A response to submissions from a heritage perspective is provided at Appendix H. The Historical Heritage Assessment was prepared as per standard practice in NSW, including the NSW Heritage Manual, and reflects requirements set out for standard</p>



Agency	Issue	SEAR	Response
			assessments of this type including those prepared for SSD and EIS generally in NSW.
	<p><i>Recommendations</i></p> <p>kk) It is recommended that the Department of Planning and Environment (DPE) require that the Historical Heritage Assessment report provide conclusions and recommendations on whether the heritage listing of the identified dry-stone walls is appropriate and to be pursued. Should the listing be found to be appropriate, it should be identified as an action within the HHA.</p>		This is not a statutory requirement or specified inclusion for such assessments in NSW. The Historical Heritage Assessment has assessed the significance of the items identified, as per standard heritage practice, and includes management and mitigation measures appropriate to the significance identified.
	<p><i>Suggested European Heritage Conditions</i></p> <p>ll) Possible Condition: Supporting heritage assessment. Any actions or recommendations of the Historical Heritage assessment (Niche October 2018) undertaken in support of the application are to be followed and implemented.</p>		Noted.
	<p>mm) Possible Condition: Conservation and protection of dry stone walls. A Conservation Management Plan be prepared to protect and conserve the dry-stone walls identified outside of the area of impact (walls 1, 2 and 5).</p>		<p>There are no statutory obligations to prepare a Conservation Management Plan. No heritage listed items occur on or in the immediate vicinity of the Project Site. A Conservation Management Plan is a standard tool for stating the required conservation principles and processes to follow to manage change on significant heritage places. The Site is not a significant heritage place and a Conservation Management Plan is not warranted or considered necessary.</p> <p>The Historical Heritage Assessment prepared by Niche provides appropriate</p>



Agency	Issue	SEAR	Response
			recommendations to address potential impacts. A further response to submissions regarding heritage is provided in Appendix H .
	nn) Possible Condition: Archival record. An archival record, consistent with the Office of Environment and Heritage requirements, is to be undertaken for dry stone walls subject to damage or removal, as identified in the Historical Heritage Assessment (Niche October 2018).		Noted and agreed.
	<p>11. Site Contamination – additional work required <i>Recommendations</i></p> <p>oo) The Historical Heritage Assessment (Niche, 2018) identified past land uses for the site and potentially contaminating activities in the vicinity of the farm dump that should be considered in the detailed site contamination investigation.</p>	12 (Concept Proposal) 6 (Stage 1 Works)	This has been addressed by the contamination response at Appendix F . The corroded tram line track and harvesting machinery identified by Niche near the farm dump are inert, scrap iron/ steel waste and not considered potential sources of contamination. There is no evidence that the tram line has contributed to contamination.
	pp) Some areas in the vicinity of the farm dump were not accessible due to vegetation overgrowth. These areas should be made accessible to enable a thorough assessment and sampling by the environmental consultant and where required, remediation of these areas should be included in any Remediation Action Plan for the site.		This has been addressed in the contamination response at Appendix F . Two targeted sampling locations were completed within the area of the dump during the detailed site investigation (these locations reported no concentrations of potential contaminants above guidelines). Given the size of the farm dump, two targeted samples are considered adequate to characterise the



Agency	Issue	SEAR	Response
			<p>soil in this area. A suitably qualified environmental consultant will be on-site during removal of farm dump to ensure remaining materials in the dump are inert waste.</p> <p>Further sampling and assessment of this area by Cavvanba (refer to clearance certificate in Appendix F) found no asbestos material/contamination.</p> <p>No additional soil testing in the area is considered to be required unless potentially contaminating material is identified once vegetation is cleared.</p> <p>Disposal of the waste material from the farm dump should be undertaken in accordance with the relevant legislation/ guideline requirements and applicable waste management guidelines for Health Facilities.</p> <p>A Site Audit Statement will also be provided to demonstrate compliance with SEPP 55.</p>
	qq) Confirmation that the sampling regime used meets the minimum recommendations of the NSW EPA contaminated land guidelines including NSW EPA Guidelines for Assessing Former Orchards and Market Gardens, Guidelines for Assessing Banana Plantations, and Sampling Design Guidelines.		Noted and confirmed.
	rr) Provide the site Remediation Action Plan for review.		Remediation Action Plans (RAPs) have been prepared by OCTIEF and Cavvanba for a small area of soil to be remediated. These are attached along with the contamination response to submissions at Appendix F . A



Agency	Issue	SEAR	Response
			Section B Site Audit Statement is being prepared to demonstrate compliance with SEPP 55.
	<p>ss) Possible Conditions Contamination:</p> <ul style="list-style-type: none"> All works shall comply with the Remediation Action Plan and the requirements of SEPP 55 – Remediation of Land. Following remediation of the site, a validation report to the satisfaction of NSW Health Infrastructure shall be submitted confirming the subject site is suitable for the proposed use. In the event that potentially contaminating material or activities are discovered during demolition, excavation, or construction works, works shall cease immediately, and a detailed contaminated site investigation and Remediation Action Plan be carried out by a suitably qualified environmental consultant in accordance with the NSW EPA contaminated land guidelines and the requirements of SEPP 55 – Contamination of Land to the satisfaction of NSW Health Infrastructure. 		<ul style="list-style-type: none"> Noted and agreed. As outlined in Section 5.5, remediation work for the soil adjacent to the main shed is proposed to be included and undertaken as part of the Stage 1 Works. This would be in accordance with the RAPs prepared by OCTIEF and Cavvanba (Appendix F).
	<p>12. General Engineering Matters – more detail is needed on the sedimentation pond design and the lawful point of discharge for the development.</p> <p><i>Recommendations</i></p>	Various, including 14 and 16 (Concept Proposal) 11 (Stage 1 Work)	
	<p>tt) Details of the sediment basins and sizing calculations (drawings C0006 and C0007) are missing from the Civil and Structural Design Report (Appendix X) and should be provided.</p>		Drawings C006 and C007 (by Bonacci) have been updated and are provided at Appendix B of the Submissions Report.



Agency	Issue	SEAR	Response
	uu) The “Integrated Water Management Plan Report” (Appendix T) section 4.1.3 notes the possibility of including rain water retention tank(s) for irrigation on the site. However, it is not clear if this is to be included in the hospital design. This should be clarified.		Based on available historical rainfall data for this area, available roof collection area, extent of landscape irrigation and water balance calculations, there have been no major environmental costs benefits identified at this stage. (Further assessment of environmental benefit and cost will form part of design development (Stage 2).
	vv) The proposal has adopted the 200L/s/ha permissible site discharge requirement from Development Design Specification D5 – Stormwater Drainage Design section D5.16. This control is generally only applied to constrained sites where the downstream stormwater infrastructure is under capacity or there is a risk of local stormwater flooding. No objection to adopting the 200L/s/ha target is raised however, in this case, Council Officers would support simply limiting post-development discharge to pre-development levels (note only).		Noted and agreed.
	ww) Council would like to request copies of the applicant’s computer stormwater modelling (DRAINS and MUSIC) for verification of the concept design		<p>DRAINS and MUSIC model details can be found in Appendix B and Appendix C of the Civil and Structural Design Report Submitted as part of the Stage 1 EIS. Both models have been refined as the site design progressed. The Civil Engineering response to submissions is attached at Appendix G. The applicable calculations and results have been provided.</p> <p>To control the existing sediment runoff resulting from the former agricultural use, four basins are under construction as part of</p>



Agency	Issue	SEAR	Response
			separate preliminary works. These will function as sedimentation basins prior to Stage 1 works and will be augmented by the construction of a fifth sedimentation basin and associated infrastructure during Stage 1 works. At the completion of Stage 2 (construction of the hospital building and associated infrastructure), the four basins will be converted to bioretention/on-site detention basins and augmented where needed to limit post development stormwater discharge to the existing pre-development discharge rates and the water quality will satisfy Tweed Shire Council requirements.
	xx) Further detail is required of how stormwater is to be physically discharged from the site. No details downstream of the proposed basins has been provided.		It is proposed to discharge stormwater via headwalls and to mimic natural flow characteristics. Energy dissipation and scour protection will be provided downstream from the headwall to minimise impact of water.
	yy) It is unclear if stormwater discharge to the neighbouring private land can be considered a 'lawful point of discharge'. Discussion and justification of the site's Lawful Point of Discharge should be added to the stormwater management plan (or similar document).		<p>This matter, including discussion on 'lawful point of discharge' has been addressed in the Civil Engineering response to submissions at Appendix G.</p> <p>Currently, the site drains stormwater runoff into the existing environmental area containing a waterbody identified as an intermittent water course or a wetland.</p> <p>It is important to note that a natural waterbody such as an intermittent water course or a wetland forming part of the northern portion of the site and includes the</p>



Agency	Issue	SEAR	Response
			<p>neighbouring site is considered a “Lawful Point of Discharge”. This principle is also established in David v Hornsby Shire Council [2017] NSWLEC 1025.</p> <p>The stormwater will be discharged via headwalls and will be controlled to mimic natural flow characteristics. Energy dissipation and scour protection will be provided.</p> <p>The headwalls are located well away from the property boundaries and the receiving waters and discharge within the development lot. The clean water being discharged, will make its way north and onto the environmental area and ultimately to the wetland which constitutes an intermittent water course and is identified as such with a dashed blue line on topographic maps and is therefore a ‘lawful point of discharge’.</p>
	zz) Further assessment of the proposed stormwater management is required from a volumetric perspective to confirm that the post-development flow regime mimics pre-development (i.e. water balance)		<p>This matter is addressed in the Civil Engineering response to submissions at Appendix G.</p> <p>Assessment of stormwater management was provided as part of the EIS and in the supporting Civil and Structural Design Report. The site is currently served by two catch drains that ultimately discharge stormwater to the receiving wetland in an uncontrolled manner. As part of separate preliminary works, four basins are being constructed to capture existing flows and any sediment. For the Stage 1 works of the proposed hospital,</p>



Agency	Issue	SEAR	Response
			<p>the basins will be augmented by a fifth (temporary) sediment basin and associated infrastructure. At the completion of Stage 2 (construction of the hospital building and associated infrastructure), the four basins will be converted to bioretention/on-site detention basins.</p> <p>The site will ultimately be divided into for catchments. Each catchment will drain to one of the four basins which subsequently will discharge stormwater in a controlled matter. The current stormwater design achieves and surpasses the requirement for water balance. For the stormwater analysis, the site discharge rates have been limited to 200l/ha (constrained site) pro rata between the four future on-site detention basins and their corresponding catchments. Updated drawings including the concept stormwater network can be found at Appendix B of the Submissions Report. DRAINS and MUSIC model details can be found in Appendix B and Appendix C of the Civil and Structural Design Report Submitted as part of the EIS. Both models have been refined as the site design progressed.</p>
	aaa) Further detail of the proposed upgrade of Cudgen Road frontage of the site, including storm water infrastructure, is required. This can be made the subject of a future application under section 138 of the <i>Roads Act 1993</i> .		This is noted and subject to future stages and detailed design.



Agency	Issue	SEAR	Response
	12. General Engineering Matters – Continued <i>Internal Works</i> <i>Recommendations</i>	Various, including 14 and 16 (Concept Proposal) 11 (Stage 1 Work)	
	bbb) The geotechnical report by Morrison Geotechnic dated September 2018 indicates that the site may require blasting. Concerns are raised regarding noise and vibration on neighbouring properties and should be addressed.		Following further geotechnical assessment, blasting will not be required.
	ccc) The Civil structural report by Bonacci Group (NSW) Pty Ltd specifies that the excavated rock is proposed to be crushed on-site. Concerns are raised regarding noise for neighbouring properties and should be addressed.		<p>Noted - The Noise and Vibration Assessment for the SSDA (ref:20181017 SVM.0001.Rep) includes a quantitative assessment of the potential noise impact predicted from on-site rock crushing. The noise mitigation measures that are considered reasonable and practicable for these works include:</p> <ul style="list-style-type: none"> ■ Applying standard construction hours; ■ Including respite periods where activities are found to exceed the 75 dB(A) highly affected noise levels at receivers, such as three hours on and one off; ■ Hoarding around the site, and local noise curtains (such as EchoBarrier or SilentUp) where these would break the line of site between noise source and receiver; and ■ Locating plant away from sensitive receivers.
	ddd) The Civil structural report by Bonacci Group (NSW) Pty Ltd specifies that the proposed stormwater		A Civil Engineering, including additional stormwater response to submissions has



Agency	Issue	SEAR	Response
	drainage system will be designed to mimic natural flows to minimise future impact to the endangered ecological community in the receiving wetland. Concerns are raised that there are no details on the proposed discharge characteristics and supporting confirmation from a qualified ecologist to indicate that there will be no impact on the existing environmental wetland area downstream.		been provided at Appendix G . The discharge system has been designed in consultation with the project ecologist to ensure no impacts on the receiving environment. An updated BDAR which also considers indirect impacts to the receiving environment is provided at Appendix DE . No significant impacts are expected and an improvement to water quality conditions is expected post-development.
	eee) The Water Sources report by Bonacci Group (NSW) Pty Ltd specifies that to comply with Councils permissible site discharge requirements approximately 6000 m ³ of on-site detention will be required. Concerns are raised that discharge from the on-site detention will concentrate stormwater flow and impact on downstream properties, this requires review.		The volume of discharge will be controlled from each of the four basins to mimic existing discharge flows for the site. The discharge system has been designed in consultation with the project ecologist to ensure no impacts on the receiving environment. Refer to Civil Engineering response and revised BDAR at Appendix G and E .
	fff) The Water Sources report by Bonacci Group (NSW) Pty Ltd specifies that the site is transversed by an intermittent watercourse (defined as a wetland area) at the north-east portion of the site. It is unclear if stormwater discharge to the neighbouring private land can be considered a lawful point of discharge as it is a wetland rather than a natural water course. NSW Health Infrastructure seek further clarification, if in fact, this is a lawful point of discharge.		As outlined previously and in the Civil Engineering response at Appendix G , the receiving area to the north is a defined wetland and watercourse, constituting a lawful point of discharge. The headwalls are located well away from the property boundaries and discharge within the development lot.



Agency	Issue	SEAR	Response
	<p>14. Other Miscellaneous – additional items for consideration</p> <p><i>Landscaping in Public Areas</i></p> <p><i>Recommendation</i></p> <p>ggg) Conditions: External Site Landscaping:</p> <ul style="list-style-type: none"> ■ Prior to issue of any construction certificate covering the upgrade of Cudgen Road and Turnock Street, a landscape plan covering the road reserves adjoining the development must be approved by the General Manager, Tweed Shire Council. ■ Prior to the release of the Subdivision Certificate for the development, the landscape works approved for Cudgen Road and Turnock Street must be completed to the satisfaction of the General Manager, Tweed Shire Council. ■ A bond to ensure acceptable plant establishment and landscaping performance at time of handover to Council shall be lodged by the developer prior to the issue of any Subdivision Certificate. The bond shall be 20% of the estimated cost of the landscaping. The bond shall be held by Council for a period of 12 months from the date of registration of the subdivision with the Lands and Property Information (NSW). 		<p>The Proposal does not involve subdivision. The intent is noted. However, these landscape works will not form part of the Stage 1 works.</p>
	<p>14. Other Miscellaneous – continued</p> <p><i>Air Quality & Dust</i></p> <p><i>Recommendations</i></p>	<p>5 (Stage 1 Works)</p>	<p>Air quality and dust management would form part of the CEMP (including relevant sub plans such as a Dust/ Air Quality Management Plan) for the Stage 1 works. This is expected to include standard</p>



Agency	Issue	SEAR	Response
			management and mitigation measures as well as any specific measures that would be determined based on final plant/ equipment to be used and the construction methodology for the works. This would be the responsibility of the Contractor and be prepared prior to works commencing, ensuring the effective management of potential dust generation.
	hhh) It is recommended that the Department of Planning and Environment (DPE) require that the Dust/ Air Quality Management Plan for Stage 1 should consider the impact of localised blasting and heavy ripping that may be required as outlined in the Preliminary Geotechnical Investigation (Morrison Geotechnic, September 2018).		Following further geotechnical assessment, blasting will not be required.
	iii) It is recommended that the Department of Planning and Environment (DPE) require that for the Concept proposal and Stage 2 of the development, where hospital site is smoke free, designated on-site smoking areas shall be identified to prevent second-hand exposure to tobacco smoke and potential pollution of neighbouring properties and public areas.		This will be addressed as part of the Stage 2 SSDA. The development will be in compliance with the <i>Smoke-free Environment Act 2000</i> and the NSW Health Smoke-free Health Care Policy [PD2015_003], with NSW Health buildings, grounds and vehicles to be smoke-free.
	<p><i>Conditions: Air Quality and Dust</i></p> <p>jjj) Air quality shall be managed in accordance with a comprehensive Dust/ Air Quality Management Plan based on the proposed plant, equipment, and construction methodology and prepared prior to the commencement of any works to the satisfaction of NSW Health Infrastructure. The Plan shall consider the recommendations of the Preliminary</p>		Noted and agreed.



Agency	Issue	SEAR	Response
	Construction Environmental Management Plan for Tweed Valley Hospital Project prepared by TSA Management dated October 2018 (Rev 03) and Preliminary Geotechnical Investigation for Proposed Tweed Valley Hospital prepared by Morrison Geotechnic dated September 2018 (Job No. GE18/144-Rev2).		
	14. Other Miscellaneous – continued <i>Groundwater and Dewatering Recommendations</i>	14, 16 (Concept Proposal) 5, 10, 11 (Stage 1 Works)	
	kkk) A Dewatering Management Plan shall be prepared by a suitably qualified environmental consultant where groundwater will or is likely to be intercepted and/or where the discharge of any waters from sediment control basins is proposed.		Dewatering will not be required as groundwater will not be intercepted during development.
	lll) The plan shall include, but is not limited to, specific details regarding water quality, treatment and monitoring regime, a site plan indicating the position of all treatment tanks and basins on the site including the reserve area to be used for such purpose in the event of the need for additional treatment facilities, predicted flow rates, and management of acid sulfate soil.		No dewatering is proposed.
	mmm) The detailed groundwater quality assessment shall include results from a NATA accredited laboratory on the following parameters: pH, electrical conductivity, dissolved oxygen, temperature, dissolved iron, suspended solids, turbidity, chloride, sulfate, chloride:sulfate ratio, dissolved aluminium, and where required TPH, BTEX, PAH, and lead.		No dewatering is proposed.



Agency	Issue	SEAR	Response
	nnn) Particular consideration shall be given to achieving the necessary detention of waters to enable effective treatment to be carried out prior to discharge in order to achieve the agreed discharge criteria particularly in respect to the management of pH, iron, aluminium and odours. This requirement may cause the need for careful evaluation of existing treatment technologies and consideration of the proposed method of excavation.		No dewatering is proposed.
	ooo) The report shall detail the proposed treatment system(s) including its capabilities, how many treatment tanks or basins will be required to satisfy discharge criteria and include a separate section on dewatering contingencies in the event of adverse impacts to the receiving waters.		No dewatering is proposed.
	ppp) Contact should be made with Council's Stormwater Maintenance Engineer regarding Council's stormwater system capacity and current condition where discharge to stormwater is proposed.		No dewatering is proposed.
	14. Other Miscellaneous – continued <i>Mosquito/Midge</i> <i>Recommendation</i> qq) Where required, detailed design and measures to ameliorate the potential impact of these species on staff, patients and visitors will be developed as part of the Stage 2 design. This will include considerations of measures to prevent mosquitoes entering hospital buildings, minimising mosquito breeding, and awareness of mosquito risks.	N/A	Noted and agreed.



Agency	Issue	SEAR	Response
	14. Other Miscellaneous – continued <i>Noise</i> <i>Recommendation</i>	11 (Concept Proposal) 4 (Stage 1 Works)	
	rrr) The Noise and Vibration Impact Assessment shall be amended to consider the impact of localised blasting and heavy ripping that may be required as outlined in the Preliminary Geotechnical Investigation (Morrison Geotechnic, September 2018).		Following further geotechnical assessment, blasting will not be required. Ripping is not expected to take place within the safe working distances for vibration to any surrounding buildings or sensitive structures and therefore vibration impacts to buildings and structures are considered unlikely. Noise and vibration monitoring (attended and unattended) would be used to ensure site laws are established and any exceedance confirmed/ identified, and all practicable noise and control measures are applied as required.
	sss) The construction noise particularly hammering, wood chipping, and rock crushing associated with this proposal is substantial and noise above background levels are likely to create amenity impacts to sensitive receivers particularly along Cudgen Road and Kingscliff TAFE. Highly noise affected levels or where noise is outside recommended standard hours as per Interim Construction Noise Guideline (DECC, 2009) may cause a strong community reaction to noise and negotiation with affected premises is recommended.		Noted and agreed.
	ttt) An extension to construction noise is proposed to meet the delivery timeframe. It is noted the Interim		Noted. Saturday hours of work have been revised accordingly (i.e. 8.00 am to 1.00 pm)



Agency	Issue	SEAR	Response
	Construction Noise Guideline (DECC, 2009) recommends Saturday 8.00 am to 1.00 pm. Given the potential disturbance of noise sensitive receivers it is recommended that Saturday hours are kept consistent with the Guideline and limited to 8.00 am to 1.00 pm on Saturdays.		
	uuu) Provision of dilapidation reports may be required.		Noted and agreed.
	14. Other Miscellaneous – continued <ul style="list-style-type: none"> ■ Structural capacity of the site. ■ Accessibility. ■ Building Code of Australia Certification. ■ Plumbing and Drainage. <i>Recommendation</i>	Plans and Docs	
	vv) Documentation required to ensure future compliance with AS 1428.1 - 2009 Design for access and mobility, AS 2890.6 - 2009 Parking facilities - Off-street parking for people with disabilities and the BCA site plans inclusive of future finished ground levels, contours and conceptual details of pedestrian access from Cudgen Road and within the site and all accessible parking spaces over the site to enable entry to all facilities within Tweed Valley Hospital. www) Details to be provided of the location of static water supplies and associated hydraulic services required for future firefighting purposes.		All relevant Australian Standards and BCA requirements will be complied with.
Tweed Shire Council Second Submission This was a letter from TSC Mayor to	Council respectfully calls on Parliamentarians for an enquiry into the Tweed Valley Hospital as it has grave concerns about the Governance Processes involved to date.	N/A	Noted.



Agency	Issue	SEAR	Response
NSW Parliament. It was provided to HI to consider and address as a submission on the project by TSC.	The announcement by the Government in April this year to relocate the hospital from Tweed Heads down the coast to classified State Significant Farmland in Kingscliff has been met with ongoing protests by the community	N/A	Noted.
	The established plan for increased hospital services was always for the existing hospital in Tweed Heads to be expanded as clearly identified in the 2013 Tweed Hospital Master Plan	N/A	Noted.
	The NSW North Coast Regional Plan 2036, released last year, has no mention of any need to relocate the hospital.	SEAR 2	<p>The need for a significant expansion of health services has been acknowledged for many years but until the NSW Government funding commitment in July 2017, for a new greenfield hospital, there was no pathway to meet the service need. This matter is comprehensively dealt with in Section 5.2.3 of the EIS.</p> <p>It is noted that a number of hospital upgrades that are proposed or currently under construction are not mentioned in the North Coast Regional Plan 2036. For example, the Coffs Harbour Hospital Expansion and the new Macksville Hospital for which early works have commenced are not mentioned in the Plan, as again, they could not be realised without a significant funding commitment from the NSW Government.</p>
	The proposed variation to the hospital planning regime for the Shire brings with it significant implications.	SEAR 1	Noted.
	The State Significant Farmland is greatly valued by the community and the community has rejected numerous attempts to rezone this area over the years.		Noted. This comment primarily relates to the re-zoning of the site, not the SSDA.



Agency	Issue	SEAR	Response
	The North Coast Farmland report identifies that the State Significant Farmland area of the Cudgen Plateau is the only contiguous farmland area of this classification in the Shire. At 534 ha in size this area only just meets the 500-ha size required to make a viable farming precinct, so the loss of 16 ha for the hospital puts this whole farming precinct at great risk, particularly as much of this farmland is also being land banked by developers.		Refer to previous comments.
	The impacts on the small coastal town of Kingscliff are also significant with the imposition of this eight-storey hospital in a three to four storey area and with the changing character and congestion the hospital will bring.		This matter is comprehensively addressed in Sections 5.2.13, 5.3, 5.4 and 5.7 of the EIS and in Section 3 of this Report.
	The social impacts of this relocation will greatly affect the aged population who have traditionally moved to Tweed Heads in their most senior years to be close to the hospital. This problem is exacerbated with very limited public transport.		<p>This matter is comprehensively addressed in Section 3 of this report.</p> <p>Additional social and economic impact assessment (SEIA) has been provided and attached at Appendix M. The SEIA submitted with the EIS recommended that a range of services not included in the service scope of the Tweed Valley Hospital, would be best delivered in, or collocated with, a community health facility located in or close to the Tweed Heads Town Centre.</p> <p>NNSWLHD is planning the establishment of the HealthOne facility in Tweed Heads with services that will complement those at TTH. The scope and scale of the HealthOne facility will be further developed in coming months, but the HealthOne will provide Community and Allied Health services to the population of Tweed Heads, Tweed Heads South, Tweed</p>



Agency	Issue	SEAR	Response
			<p>Heads West, Terranora and Cobaki. The following services are being considered:</p> <ul style="list-style-type: none">■ Aboriginal Health and Integrated Aboriginal Chronic Care (IACC)■ BreastScreen■ Child and Family Health services■ Chronic Disease Management■ Community Nursing and Breast Care■ Day Therapy■ Hospital in the Home■ Harm Reduction, Needle and Syringe Program and HARP Health Promotion■ Older Person services■ Oral Health■ Podiatry■ Women's Clinic■ Clinics for Midwifery Group Practice.
	The Northern Region Plan 2036 identifies Tweed Heads as a Regional City and the hospital as the main economic driver for this city. Removing this hospital will have undoubted economic impacts to the town that have hardly been acknowledged.		<p>As above. Additional social and economic impact assessment has been provided and attached at Appendix M.</p> <p>This matter is also comprehensively addressed in Section 3 of this report.</p>
	The lack of transparency in the decision-making process has been particularly concerning. Minister Hazard made the original announcement with no consultation whatsoever.		<p>Site selection was addressed in the Site Selection Summary Report that was submitted with the EIS and is accessible on the Tweed Valley Hospital project website. This matter is comprehensively addressed in Section 3. of this report.</p>
	Contrary to the requirements of the planning regime the Minister has issued an application for a SEPP for the site		<p>Health Infrastructure's site activities have been, and at all times will be, conducted</p>



Agency	Issue	SEAR	Response
	and simultaneously issued the State Significant Development Application instead of issuing these applications consecutively. The Minister is also utilising exempt and complying development provisions which appears may also be contrary to legal requirements for a holistic assessment.		properly and in accordance with law. The EIS and this Submissions Report has comprehensively and holistically assessed the Proposed SSDA for the Tweed Valley Hospital (Concept Proposal and Stage 1 works) in accordance with the EP&A Act and SEARs issued by DPE.
	It is feared that there may be other agendas at play here and Council calls on all Members of Parliament to look into this as a matter of urgency due to the urgency and haste of this process.		Noted.



4.4 Department of Planning and Environment – Statement of Key Issues

The Department of Planning and Environment has required Health Infrastructure to respond to a number of matters to assist it in its assessment of the SSDA. These matters and the Project team's response is provided below.

4.4.1 Key Issues

4.4.1.1 Concept Building Envelope

Issue

The EIS indicates that the lowest level of the envelope is RL +19. The Department seeks clarification of this RL as the basement level is located below the lower ground floor and the basement is located well above the existing ground level in certain areas (such as the north-western section) comprising a storey. Please confirm the basement level RL and the height datum (i.e. AHD or other).

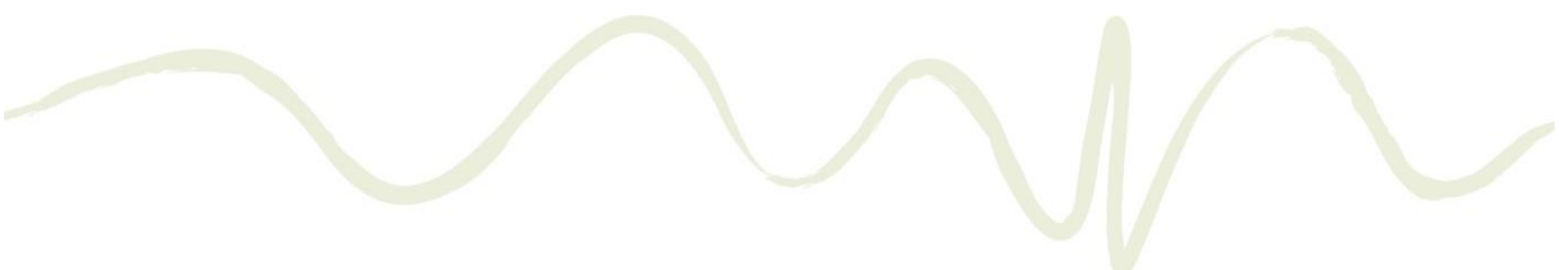
Given that the concept proposal seeks approval for the maximum building envelope, the depth of the envelope below the ground should be specified which includes the maximum depth of the basement level.

Please provide the indicative maximum gross floor area that would be facilitated by the concept building envelope. This should include the maximum indicative basement floor area.

Response

As outlined in the architectural and urban design response at **Appendix D**, the EIS application and supporting Concept Proposal drawings, specifically AR-SKE-50-101, 201, 301 and 401 identifies a building Ground Level of RL +28.00 and Lowest Point of Envelope of RL +19.00. For clarity, the annotation "Ground Level" is to be interpreted as Main Public Ground Level Entrance, being nominally level with the site entry level off Cudgen Road. Further, the "Lowest Point of Envelope" is to be interpreted as the Lowest Habitable Floor Level of the building. Additionally, levels have been annotated as RL's (relative level). These levels should be read as Australian Height Datum (AHD) levels, measured in metres above sea level e.g. RL +28.00, meaning +28m above sea level (or +28.00 AHD).

Since submission of the EIS, design development and refinement in response to submissions has occurred which has included seeking to achieve a more efficient hospital/ site interface relationship. The purpose of this is to take advantage of the sites natural topography and limit the need for excessive earthworks (cut and fill). As a consequence, the Main Public Ground Level Entrance AHD (RL) has been slightly lowered to +27.75 AHD. Further, an additional level has been inserted under part of the previous lowest habitable floor level to take advantage of the available unplanned zone identified by DPE above the existing Natural Ground Level (NGL) in order to limit the need for substantial earthworks (fill). The lowest habitable floor level within the proposed amended planning Envelope is +14.25 AHD – refer to the appended amended Concept Proposal drawings (**Appendix B**).



Where the NGL still remains lower than the lowest habitable floor level, it should be interpreted that the Maximum Planning Envelope continues extending down to intersect with the ground plane (and to include below ground substructure). The surrounding ground level to the hospital will either remain at the existing NGL AHD or be modified by bulk earthworks as part of the site design.

The sloping topography of the project sites' ridge line was, at the early site selection stage, identified as an advantageous feature, which could accommodate the design of substantially on-grade lower ground levels (minimal basement and excavation) which serve to conceal views of the full hospital scale from the main access road interface. The design team have sought to locate the proposed hospital building on the ridge which has enabled accommodation of three lower habitable building levels, below the Main Public Ground Floor Level.

The maximum potential gross floor area accommodated by the proposed Maximum Planning Envelope based on applying the maximum envelope density percentages illustrated in drawings AR-SKE-50-101, 201, 301 and 401 (including lower ground and roof plantroom levels) totals 85,688 sqm. However, it is expected that the aggregate result (i.e. some zones at upper end of range of densities and some at lower) will be limited by clinical planning requirements and project budget constraints to a Gross Floor Area (GFA) of approximately 65,000 sqm, which is consistent with the original EIS submission.

4.4.1.2 Visual Impact

Issue

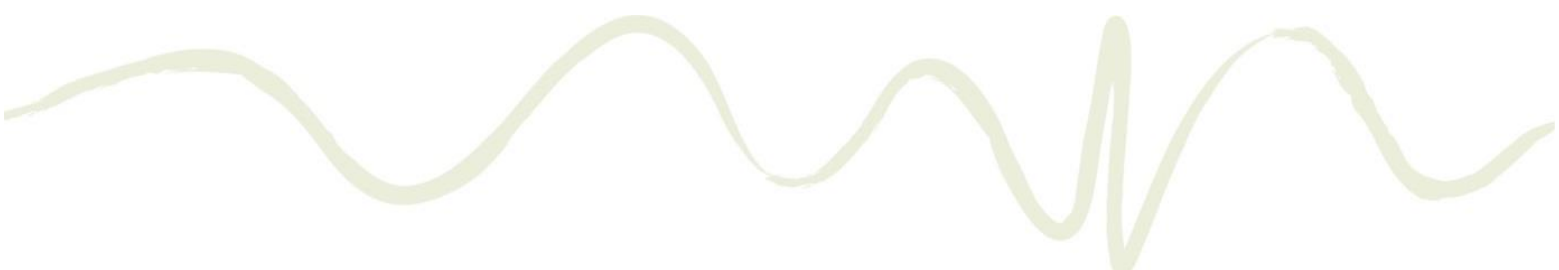
Concept Proposal

It is noted in the submitted section that the lower ground floor in the north-western corner of the concept building envelope would be 7m – 8m above the natural ground level (RL + 11.9). Unmitigated, this has the potential to result in detrimental visual impacts on the neighbouring properties and the wider area due to the anticipated high retaining walls on the northern side, the sloping topography in this part of the site and the potential lack of vegetation screening due to Asset Protection Zone requirements. Details of potential mitigation strategies should be provided.

The levels (RL) of the staff car parking on both sides of the concept building envelope are needed to ascertain the level of these areas when compared to the proposed building envelope and the levels at the site boundaries. The ancillary areas (such as proposed car parks or other) with associated levels have not been included in the sections submitted with the "Concept Proposal" drawings. Sections should be provided through the site including the car park and service road levels along with the concept building envelope to ascertain the potential visual impact of these areas and associated retaining walls on the surrounding properties. Details of the proposed mitigation measures, to minimise any potential detrimental visual impact due to the concept building envelope and the ancillary areas must also be provided.

Response

As outlined in the architectural and urban design response at **Appendix D**, the road and surface carparking designs have undergone refinement since lodgement and following the exhibition period and submissions received. This has occurred to position the proposed new road and surface car parking levels as close to natural ground level as possible in order to mitigate excessive earth cut and fill requirements. In accordance with the proposed revised Concept Plan AR-SKE-10-006, the logistics yard located at the north-west corner is to be set at 1.2 m below the basement 1 level of the hospital (loading dock) resulting in a finished logistics yard ground level of +17.55 AHD. Based on the



immediately adjacent natural ground level at the closest west title boundary interface of +11.9 AHD this reflects a relative level differential of approximately 5.6 m. Resultantly, provision of a 10 m wide vegetated buffer at natural ground level and an elevated roadway incorporating 2.5 m wide footpath, accommodates a 30-degree angle embankment (batter).

From the neighbouring property, assuming the agricultural buffer is maintained at a minimum height of three metres, only 2.6 m height receding embankment will be visible, which when set-in over 20 m from the title boundary would impose minimal visual impact on the amenity of the adjacent land to the west. The design team will give further design consideration to this boundary interface and develop appropriate visual impact mitigation measures as part of the landscape design proposal which will be submitted with the Stage 2 SSDA. It is expected that, in time, the agricultural buffer will entirely conceal views of the raised north service road from the adjacent property. Should the neighbouring land owner in the future intensify agricultural activity, there is capacity to widen the vegetated buffer to a maximum width ranging from 22 m to 30 m as outlined in the land use conflict risk assessment response at **Appendix K**.

A new Master Plan, Proposed Site Levels drawing AR-SKE-10-009 at **Appendix B** includes both existing and proposed site level information. This has also been coordinated in the revised Building Elevation/ Section drawings, accompanying this report at **Appendix B**.

Visual Impact of Retaining Walls

The visual impact of retaining walls on the surrounding properties will be mitigated using a combination of techniques. Banking of landscape areas to the top and toe of walls (at appropriate maximum grades), will minimise total wall heights. Walls will also be terraced where possible to further reduce bulk and scale. The materiality and texture of walling will also be carefully considered to mitigate visual impact. Gabion walling is currently being considered, using local natural stone with hues that complement the natural landscape, and reference the local historic stone wall construction by South Sea Islanders. The walling will then be masked with vegetation. Generous zones of planting will be provided to the foot of retaining walls wherever possible, and cascading planting to the top of walls where appropriate. Within Asset Protection Zones (APZ), planting will remain an important technique to mitigate visual impacts, albeit the species mix and distribution in these areas will be designed in accordance with APZ requirements, including planting in clusters (rather than rows), maintaining gaps in canopies, and low flammability plants. Incorporation of tree species of a height to visually mask the building is proposed.

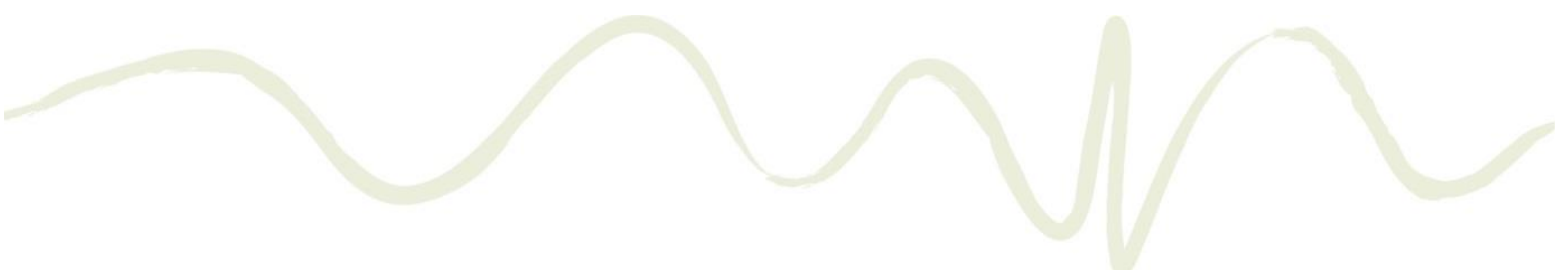
4.4.1.3 Cut and Fill and Retaining Walls

Issue

Stage 1 works

It noted that fill is proposed along the western section of the site as part of the Stage 1 works. The cut and fill details within Drawing number C011 Rev P4 is unclear and does not provide complete details of the proposed fill depth. However, it appears that up to 8m fill is proposed on the western side. It is anticipated that this fill is required to support the service road and the proposed car parking areas identified in the concept proposal. This should be clarified.

The extent of cut and fill should be over laid on the survey plan and the areas of cut / fill should be hatched identifying the resultant levels after the landform modification. The Response to submissions should also identify whether retaining walls or any form of batters are anticipated to be built in the future (or part of the Stage 1 works) to support the filled areas, especially on the western section, so



that the extent of the proposed works (both for Stage and Concept Proposal) are clear. Should retaining walls be proposed as part of the Stage 1 works to support the filled areas in the western section of the site, then the details of the visual impacts of the retaining walls on the surrounding properties should be provided. The Stage 1 works include benching of the site with a number of retaining walls. RLs of the top of the walls and sections through the site identifying the height of each of these retaining walls should be provided. Please clarify whether these retaining walls are required to accommodate the car parking areas in the future.

Concept Proposal

It is also noted that the concept proposal includes a vegetative buffer along the western edge to prevent any adverse impacts due to the proposed land use and the adjoining agricultural land. However, given that the proposed access road is located close to the boundary and the fill (in Stage 1) is proposed to support the infrastructure within the site, it is unclear as to how this vegetative buffer would be maintained or the width of the buffer as part of the future application.

Additional landscape plans with details should be provided to confirm the ability to maintain this vegetative buffer and the extent of the buffer in the future.

Response

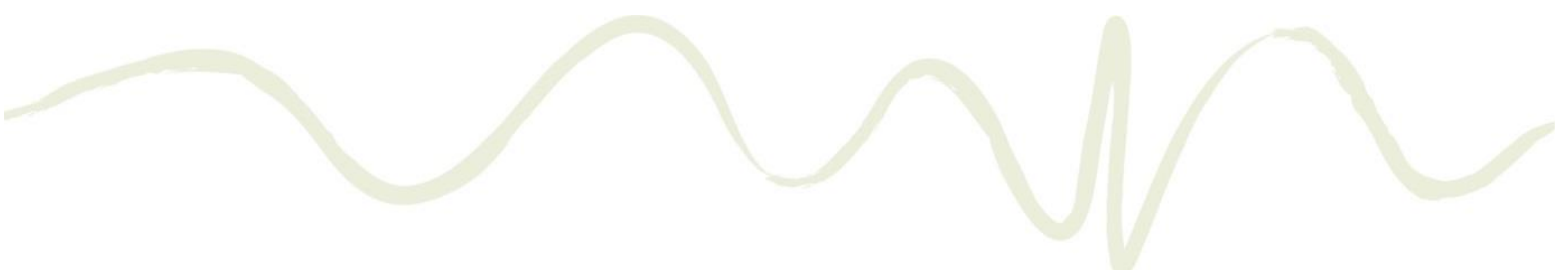
The submitted Master Plan-Concept Plan AR-SKE-10-006 (amended), indicates the proposed north service road west kerb edge at its closest point to the west title boundary measures 22 m. As outlined in the relevant response above, a 30-degree angle land embankment is achievable at this boundary interface. Some minor service road realignments have also been applied to optimise the north service road relationship with the site's existing topography. This is illustrated in the revised Concept Proposal and Stage 1 SSD drawings, which accompany this report at **Appendix B**. Note that it is the design objective to adopt battered land embankments (which can be planted) in favour over retaining walls. Both embankments and retaining walls will be well integrated within the landscape design to be included in the Stage 2 SSDA.

The civil engineering response at **Appendix G**, also outlines that in summary the updated drawings address the items above, including:

- On the revised Drawing C011, a legend is provided showing the levels of cut and fill over the existing survey levels.
- Sections of the site are provided showing the general site grading to better visualise the proposed site levels.
- Where included, typical retaining wall sections and details are shown on drawings C055 and 056. The sections are for retaining structures up to 3.40metres in height. The progression of the design aims to minimise the use of retaining structures as noted above and it is not proposed to have any retaining walls over 3.40metres in height. Based on strategies and measures outlined previously, no significant visual impact is expected.

Maintaining the Vegetative Buffer

In accordance with the Land Use Conflict Risk Assessment advice, a minimum 10 m wide vegetative buffer is required for this portion of the western boundary. The proposed access road is set-in minimum 22 m from the west title boundary, therefore local modifications to ground levels will have minimal impact on the integrity of the buffer zone, ensuring the vegetated buffer can be maintained in perpetuity. Furthermore, the curved alignment of access road through the vegetative buffer and additional buffer width at the south-west corner of the site assists to maintain minimum buffer integrity. The landscape design will provide a resolved strategy that addresses the west boundary interface the



details of which will be submitted with the Stage 2 SSDA. As outlined previously, should intensification of agricultural activity occur on the adjacent lot, the master plan has capacity to accommodate the widening of the vegetated buffer from 10 m to a maximum width range of 22-30 m, as required.

4.4.1.4 Land Use and Offsets

Issue

Concept Proposal

Section 5.2.14 of the EIS states that the proposal will result in the loss of 16 hectares (ha) of State Significant Farmland. Pursuant to the principles of ecologically sustainable development, specifically “inter-generational equity”, reasonable measures / strategies should be proposed to offset the loss of the agricultural potential of this land due to construction of the hospital.

Section 5.6.3 of the EIS notes that Dept of Premier and Cabinet is currently pursuing efforts outside of the project to support the agricultural industry in the region that, “If successful, this initiative could more than offset the reduction of eight hectares of crops at any one time on the Project Site.” The Response to submissions should include an overview of the measures that are being proposed to offset the loss of the agricultural potential of the land. In this regard consideration should also be given to broader commitments such as using local produce in the future for the hospital etc.

Response

The Department of Premier and Cabinet, with the support of the Tweed Valley Hospital Cross Agency Planning Committee, including Health Infrastructure, is currently pursuing a collaborative opportunity with relevant agencies, outside of the Project, to support the agricultural industry in the region. This will include improving utilisation of agricultural land, including that which has not been farmed for some time. If successful, this initiative would provide opportunities to offset the reduction of eight hectares of crops at any one time on the Project Site. Engagement with DPI Agriculture regarding incentives/ strategies as well as NSW TAFE and Universities will form part of the development of that opportunity. If successful, this initiative would provide opportunities to offset the reduction of arable land and eight hectares of crops at any one time on the Project Site.

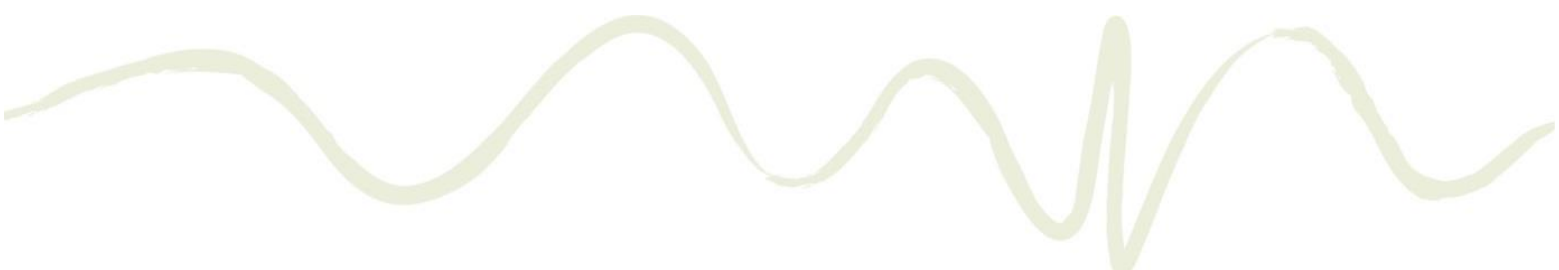
Once operational, the hospital will be required to comply with State Purchasing Policies in terms of value for money, and competitive procurement. During operational commissioning, Northern NSW businesses will be supported through the Industry Capability Network in the same manner proposed for construction opportunities. Further to this, Initiatives such as The Buy Local Project Northern Rivers, an existing partnership between Lismore City Council, NNSW LHD and University Centre for Rural Health are being considered for development with Tweed Shire Council and other interested parties to encourage further local business participation.

4.4.1.5 Noise Assessment

Stage 1 works

Issue

Table 25 in Section 7.3.4.1 of the Noise Impact Assessment identifies a high level of exceedance in Residential Catchment B, Educational B (the TAFE) and some exceedances at Educational A (the High School) for standard construction hours in Stage 1 works (20 – 24dB).



Section 7.3.5 notes that the individual and cumulative noise levels from operations of various plant and equipment are predicted to be up to 19dB lower when location of activities within the site boundary are further away from a particular receiver. The noise assessment report should include detailed justification of how this reduction in the noise emissions can be achieved during the Stage 1 construction works.

Response

To clarify, Section 7.3.5 notes that noise levels are predicted to be up to 19dB lower for plant and equipment when located on the proposed site at the centre of the construction site, where the maximum level is calculated at the closest boundary to the respective receiver. This is not proposed as a noise reduction measure. The ICNG requires, and it is usual practice, to predict the reasonable worst-case noise level. For construction-type activities this will typically be when plant is operating close to an assessment location. However, on larger construction sites (such as this one) where plant moves around, noise will not be at the reasonable worst-case noise level throughout the entire duration of the activity: it will be lower when the plant is further away. This information has been provided in the assessment because potentially affected receivers can be potentially misled, and unduly alarmed, if only the worst-case levels are presented without clarifying that that levels will be lower at times throughout the construction activity. It should also be noted that no blasting is required or proposed as part of the project.

Issue

Several mitigation measures have been recommended to reduce noise emissions due to construction works in Stage 1. However, the mitigation measures are considered to be generic and applicable to all construction sites. The proposed mitigation measures should be detailed to include:

- *approximate estimate of noise reduction at each effected noise sensitive receiver with the implementation of these measures;*
- *heights of hoardings and locations of screenings;*
- *the triggers that would require the employment of additional mitigation measures; noise monitoring methods during construction works; and*
- *a brief stakeholder engagement process for determining appropriate activity planning or respite times or when no mitigation can be proposed.*

Response

Section 7.3.5 recommends several mitigation measures. They are generic and applicable to all construction sites. Approximate estimates of noise reduction at each affected noise sensitive receiver with the implementation of these measures are:

- Scheduling noisy activities to occur outside of the most sensitive times of the day for each nominated receiver - up to 85dBA. For example, avoiding works during “outside standard hours” at nearby residential receivers - this would eliminate 85dB predicted at residential catchment B for Excavator with Hammer Saw.
- Implementing equipment-specific temporary screening for noisy equipment, or other noise control measures recommended in Appendix E of AS2436 - up to 5 to 10dBA.
- Solid screening or hoarding as part of the worksite perimeters - up to 5dBA.
- Locate specific activities such as carpentry areas (use of circular saws, or wood chipping areas etc.) to internal spaces or where shielding is provided by existing structures or temporary screening - up to 5 to 10dBA.
- Limit the number of trucks and heavy vehicles on-site at any given time (through scheduling deliveries at different times) - up to 5dBA.

- Unnecessary idling of vehicles and equipment - up to 5dBA.
- Traffic routes are to be prepared to minimise the noise impact on the community - up to 5dBA.
- When loading and unloading trucks, adopt best practice noise management strategies to avoid materials being dropped from a height - up to 5 to 10dBA.
- Adopt quieter methodologies. For example, where possible, use concrete sawing and removal of sections as opposed to jackhammering - up to 20dBA.
- Ensure that any miscellaneous equipment (extraction fans, hand tools, etc), not specifically identified in this assessment, incorporates silencing/ shielding equipment as required to meet the noise criteria - up to 20dBA.

Acoustic Studio expects that hoardings would be around 2.4 m height. Screenings would most likely be limited to hoarding around the site perimeter, as noted in the assessment.

Acoustic Studio recommends that alternative temporary noise curtains are investigated for the site, noting that SilentUp noise curtains are marketed in NSW with a maximum height of six metres. It is understood that the use of noise curtains of this type require wind loading and other engineering considerations and may not always be practicable for this project. However, it is an example of one potential option which would be investigated as the construction methodology and site conditions are progressed.

All practicable and reasonable additional mitigation measures would be implemented at the Project triggers of the Noise Management Levels and the “Highly Noise Affected” level of 75dBA.

Section 7.6.1 of the Noise and Vibration Assessment prepared for the SSDA recommends monitoring is considered at the East Boundary (Catchment A) and the Southern Boundary (Catchment B) at the commencement of works for a minimum of 1.5 days per week (at least) for the first four weeks of construction. Further monitoring would be reviewed after this time or sooner should it be deemed necessary by the acoustic consultant and project manager. Attended monitoring would also be carried out at the commencement of works to establish relevant site laws for the project and confirm actual noise levels against criteria/ predictions.

A stakeholder engagement process for determining appropriate activity planning or respite times or when no mitigation can be proposed would include consultation with the TAFE, school and other noise sensitive receivers to establish, for example, times of exams for activity planning; class times for respite; and vacation times when no mitigation is necessary. In addition, Section 7.7 Noise and Vibration Assessment prepared for the SSDA outlines recommendations for the Contractor to establish a communication register for recording incoming complaints and procedures for addressing complaints.

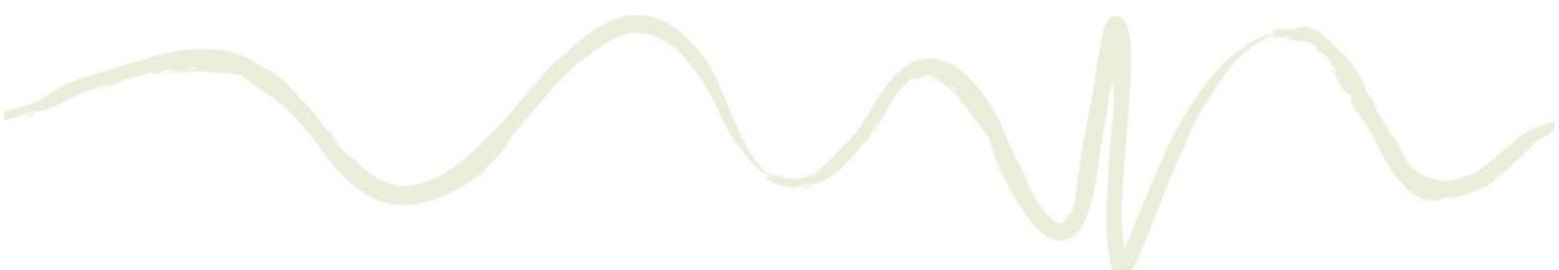
4.4.1.6 Social Impact Assessment

The following section is informed by additional information provided by SGS Economics and Planning including the following documents which are attached as **Appendix M**:

- SGS Economics and Planning - Response to Government Submissions.
- Tweed Heads Local Opportunities and Impacts Review.

Issue

The SEARs required that the Social Impact Assessment be taken into consideration, the Social Impact Assessment Guideline (IAIA, 2015). It is unclear whether these guidelines have been considered in the preparation of the Social Impact Assessment Report. Confirmation regarding this and the details of



that consideration should be provided. The following comments are provided with regard to the submitted Social Impact Assessment Report (SIA).

Response

The Social and Economic Impact Assessment (SEIA) is guided by the principles outlined in the Social Impact Assessment Guideline (IAIA, 2015), as relevant to the specifics of the Tweed Valley Hospital project. The SEIA outlines the issues pertaining to the function of the hospital in the Tweed Valley Catchment, considers and assesses the impacts that elements of the project or process will have and, where applicable, provides mitigation recommendations or links to other studies that provide mitigation procedures.

The IAIA Guidelines also note the role of community engagement through ‘participatory processes’ (p8). As part of the wider Tweed Valley Hospital project, significant stakeholder and community consultation has been undertaken. This is detailed in the Tweed Valley Hospital Project Stakeholder and Community Consultation Report undertaken by Elton Consulting, which estimates that 300 external stakeholders were reached through 360 events. These included landowners.

Issue

The SIA should include the baseline information identifying the local community values of Kingscliff and should then assess the impacts based on this baseline data.

Response

Chapter 2 (Context) of the SEIA report focuses on baseline information and data that is focused on this local catchment (which includes Kingscliff), and then benchmarks this information against regional and state-wide trends in order to put local trends into context. The assessment of impacts was then based on this baseline/contextual data.

Issue

The justification regarding the re-location of the Tweed Hospital from its current location to the proposed site, largely focusses on access to health care. The report also acknowledges that the relocation would have some negative impact on the local employment and the local economy. However, the SIA does not propose any reasonable mitigation measure to be delivered by Health Infrastructure or others to offset this impact on the local economy.

Response

The SEIA report does not justify the decision to relocate the Tweed Valley Hospital – that justification sits with the business case, service planning and site selection documents. The SEIA focuses on the identification of all impacts – positive and negative – arising from this relocation.

The assessed ‘Medium’ negative impact to the Tweed Town Centre relates to the loss of the hospital as a land use on this large site. However, further work has since been undertaken to review the future health services that will continue to be delivered in Tweed Heads.

Northern NSW Local Health District (NNSW LHD) is planning the establishment of a HealthOne facility in Tweed Heads, with services that will complement those at the Tweed Valley Hospital. The scope and scale of the HealthOne facility will be further developed in coming months, but the HealthOne will provide Community and Allied Health services to the population of Tweed Heads, Tweed Heads South, Tweed Heads West, Terranora and Cobaki.



Issue

It is considered that a detailed assessment of the impacts on health-related services and other businesses such as local coffee shops, that are associated with the current hospital, should be conducted. Following this, reasonable mitigation measures should be proposed to minimise any negative impacts upon local businesses and users due to the relocation of the hospital.

Response

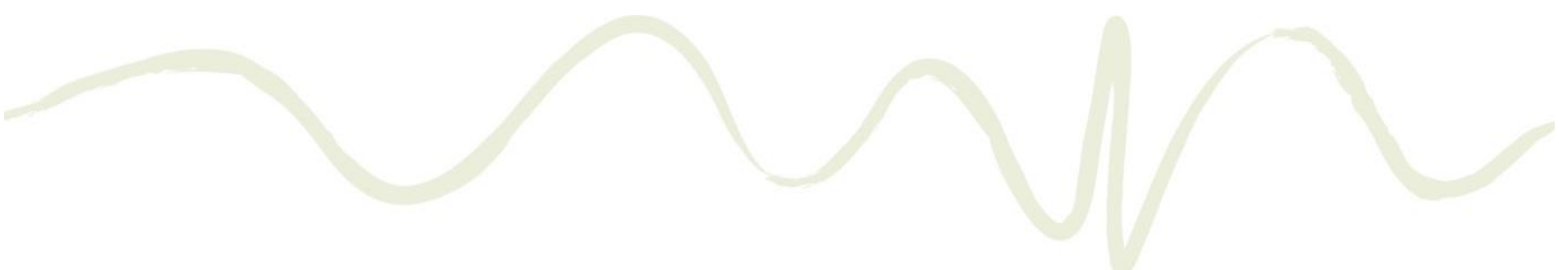
Further work has also been undertaken to better understand the social and economic impacts on Tweed Heads and potential mitigation measures, identifying likely future uses for further investigation.

Health Infrastructure commissioned an analysis (Refer to **Appendix M**) which focuses on this issue in detail through interviewing staff at Tweed Heads Hospital. 51 people were interviewed in total. The primary findings were that:

- A significant majority of participants drive to The Tweed Hospital and therefore the new hospital's location is not considered to be a major impact. Those staff residing in NSW identified that they will have similar or even improved journey to work times when the hospital moves location.
- All staff interviewed used the on-site hospital cafeteria whether buying there or bringing in food from home. Only four of the 51 respondents left the hospital to purchase lunch or coffee, and only occasionally.
- The majority (49 out of 56 respondents) of those interviewed did grocery shopping close to home or on their way home, at a location that was convenient to them. Of the 51 surveyed, only two identified using the local Tweed Mall to do their grocery shopping due to its proximity to the hospital.
- Interviewees noted that fuel was purchased as convenient or on price, not based on proximity to work or home.
- No staff interviewed had children currently in child care or used elder care. Those that have previously utilised child care noted that proximity relative to the hospital, rather than place of residence, would be the preference.

Concurrent analysis undertaken by SGS also found that:

- Both the resident workforce and the jobs located within Tweed Heads – Coolangatta display a prominence of population serving industries. This is partially owing to the influence of tourism within the area. Increases in population within the region will serve to grow demand within these industries – independently of where health infrastructure facilities are located.
- Employment within the Healthcare and Social Assistance industry represents a significant part of total employment within the areas examined and, while hospitals constitute a large proportion of this employment, it is spread across a variety of sub classifications. Aged care services constitute a considerable proportion of employment within these industries.
- The resident population within the workforce catchment is ageing, with a higher than average proportion of residents aged 65 years and over, and a higher proportion of residents approaching retirement age. This indicates that further shifts towards population serving industries and aged care services into the near future.
- The employees of the hospital have a limited engagement with businesses in the surrounding area, with the survey results indicating that there was very little economic input in terms of worker spend originating from the hospital. This indicates that moving the hospital would not likely cause significant disruption to patterns of trade or threaten the viability of retail or food businesses within the area.



SGS has also undertaken further analysis into what other land uses could be developed on the site to assist with economic development in the Tweed Town Centre in the long run, with a focus on the relative economic impacts that these uses may have in the Tweed Heads Town Centre. It was found that potential and/or suitable land uses on the vacated site could include:

- Aged care residential/retirement living
- Residential development
- Tourism
- Accommodation
- Education.

Issue

The Community Consultation Report outlines concerns raised in the community about the negative impact of the proposed hospital on the local character of Kingscliff and potential conflicts with the surf tourism and agricultural character of the area. The SIA does not acknowledge or assess these concerns, or the potential impacts of the hospital on the future land release areas in the vicinity.

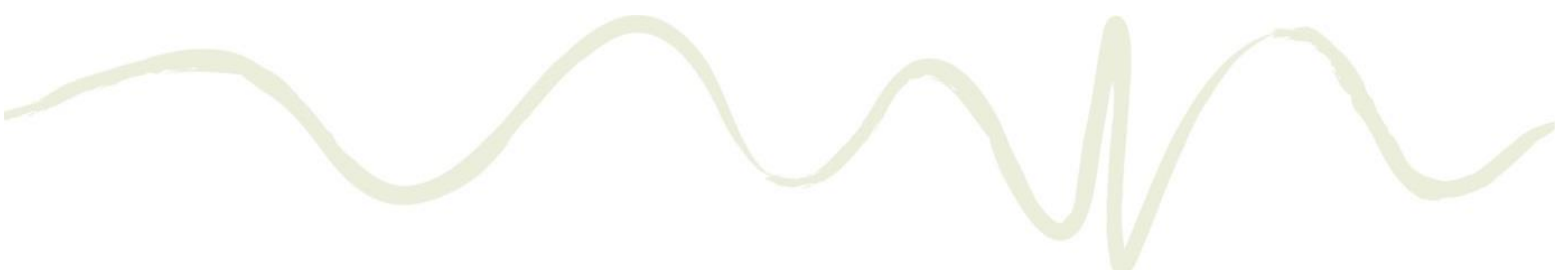
Response

It is acknowledged that this is an issue which has been raised in community consultation and through the submission process.

With regards to the consideration in the SIA, these concerns were reviewed but were not assessed as material impacts. Development of the Tweed Valley Hospital with the appropriate design and mitigation measures will not undermine the local character of Kingscliff or have material impact on the local surf tourism industry as the hospital site is away from the centre of the Kingscliff township and coastline. It is noted that the current hospital site is a similar distance from other beaches in the area, albeit in the larger centre of Tweed Heads, and its operation is not considered to have an adverse impact on tourism in the Tweed Heads-Coolangatta area.

In relation to potential conflicts with agricultural character, some preliminary landscape concept designs contemplate edible gardening options and the opportunity to develop community gardening initiative on undeveloped land. The Department of Premier and Cabinet, with the support of the Tweed Valley Hospital Cross Agency Planning Committee (including Health Infrastructure) is currently pursuing a collaborative opportunity with relevant agencies, outside of the Project, to support the agricultural industry in the region. This will include improving utilisation of agricultural land, including that which has not been farmed for some time. If successful, at any one time this initiative would provide opportunities to offset the reduction of eight hectares of crops (offsetting those crops removed from the Project Site). Engagement with Department of Primary Industries (DPI) Agriculture regarding incentives/ strategies as well as NSW TAFE and various universities will form part of the development of that opportunity.

The Kingscliff Locality Plan (KLP) outlines that the Tweed Coast has seen exponential growth. The locality of Kingscliff has been a major contributor to this growth, elevating its settlement status from a coastal village (<3000 residents), to a coastal town (3000-20,000 residents). Kingscliff's population could surpass the population threshold usually associated with a small coastal city (>20,000 residents, Coastal Design Guidelines for NSW). The KLP outlines that the existing role of the Kingscliff locality as the subregional centre servicing Tweeds' network of coastal villages (Fingal Head, Cudgen, Casuarina, Cabarita, Hastings Point, Pottsville and future Kings Forest) is anticipated to be reaffirmed. The KLP contains a vision for the area, including:



“Expand employment generating land uses by providing land use opportunity for larger employment generating developments such as a business park, health and/or university campus, commercial and retail uses, as well as a range of student, tourist and residential accommodation types to build upon the existing industry pillars of tourism, agriculture, health and local small business.”

This statement from the KLP clearly demonstrates the important and evolving role of Kingscliff as a subregional centre. The Tweed Valley Hospital Project is very much consistent with this evolution of Kingscliff to a subregional centre and will be essential in servicing the health needs of Tweed Valley Region. It is therefore considered that the Tweed Valley Hospital will be consistent with the character of the evolving role of Kingscliff. It should be noted that the size and scale of the proposed future residential land release areas could be considered to have a potentially greater impact on local character and/or tourism of Kingscliff. It is also noted that the hospital can co-exist with those residential developments if they do go ahead.

Issue

The SIA should include additional mitigation measures regarding management of the community’s needs and expectations during the transitional phase of relocating the hospital as well as area specific mitigation measures for the community in this regard.

Response

This is noted, and further mitigation measures will be considered regarding management of community needs and expectations during the transition phase. The project will develop a targeted communications strategy. Community engagement will be ongoing through all phases of the project, through the project website and dedicated telephone line, as well as community pop-ups, online surveys, community information sessions and drop-in sessions as appropriate. Northern NSW Local Health District (NNSWLHD) is also planning the establishment of the HealthOne facility in the Tweed Heads Central Business District (CBD), with services that will complement those at the Tweed Valley Hospital (refer to previous comments and **Appendix M**)

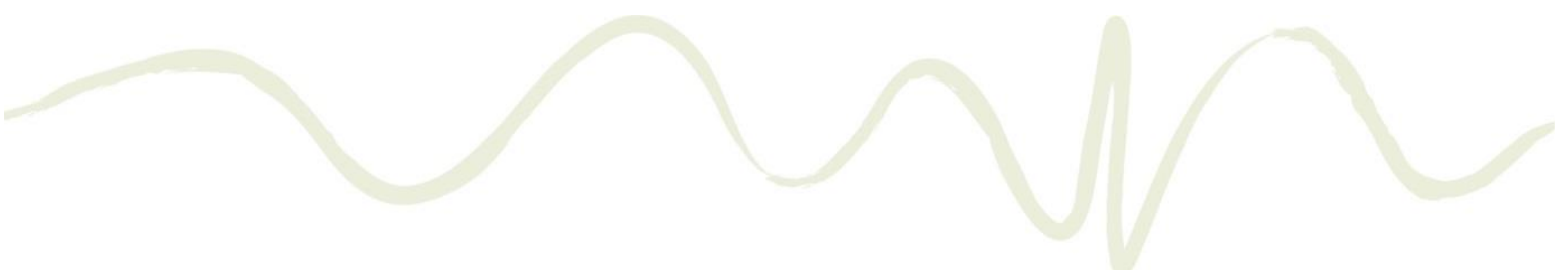
Issue

The Traffic Study indicates that there would be approximately 5,000 average daily vehicular trips due to the hospital which is considered to be a substantial increase in traffic movements when compared to the existing scenario in the locality. But the SIA states that the impact of the development on local traffic would be “Low” with no specific mitigation measures identified. The SIA should be amended to address the traffic impacts and propose specific mitigation measures considering the social aspects.

Response

The Traffic Impact Assessment follows the appropriate methodology for undertaking a Traffic Impact Assessment (i.e. the RMS Guide to Traffic Generating Developments) and addresses the SEARs for Transport and Accessibility. As part of this process the operations of the surrounding road network were assessed with background and design traffic volumes. This assessment identified all intersections (with the exception of the Tweed Coast Road/ Cudgen Road intersection) operate within acceptable performance thresholds (in terms of queuing, delays and degree of saturation).

Mitigation measures/ capacity improvements have been proposed at the Tweed Coast Road/ Cudgen Road intersection.



NSW Health Infrastructure is working closely with Council and RMS on the delivery and timing of external traffic infrastructure to support the Project and to ensure that this is commensurate with Council's future planning for the surrounding road network.

This section of the SEIA report (specifically Section 4.2, page 50) makes a reference to the Traffic Impact Study for full details of the mitigation measures being proposed by Health Infrastructure with respect to traffic impacts. Additional discussion on traffic related impacts and how these will be mitigated is provided in **Appendix M**.

Issue

The hospital would be operating for 24 hours, seven days a week. There would be several activities that would be at night time including helicopter movements, ambulance movements and traffic. The SIA does not identify and assess the social impacts due to these activities that would occur outside the day time hours.

Response

Cudgen Road and Turnock Street are part of an existing public transport route which includes public bus stops fronting the subject site.

Consultation has been held with Transport for NSW and Surfside and will be ongoing to ensure appropriate public transport updates and provisions are in place to support the Tweed Valley Hospital.

The broader Tweed Valley Hospital helicopter approach and departure "catchment" area generally, encompasses the area out to the coast from the location of the Tweed Valley Hospital and then northwards towards the Queensland border. Advice from specialist consultant, AviPro (**Appendix Q** of the Response to Submissions report), is that the number of helicopter movements to and from the new Tweed Valley Hospital should not be significantly greater than the current number of movements to and from The Tweed Hospital. Therefore, the hazard/risk is not appreciably different.

Further, as part of any commissioning documentation, any necessary "Fly Neighbourly" procedures can be developed in conjunction with helicopter operators with regard to every day hazards such as birds, bats and even drones which need to be considered during the planning and conduct of flight operations. This is considered a normal risk that is addressed thousands of times a year when helicopters conduct their life saving work for NSW Ambulance. Typical daily traffic profiles have distinct peaks (generally morning and afternoon peak hour peaks) which are used for design and assessment purposes. The Traffic Impact Assessment (Appendix L of the EIS) prepared by Bitzios, identified that off-peak and particularly night-time traffic volumes are significantly lower than peak volumes, with hourly traffic volumes representing less than one percent of the overall daily traffic volumes generated by the hospital. On this basis, it is estimated that less than 50 vehicles per hour would be generated by the development before 10:00 pm, which is expected to reduce further during late night periods (between 10:00 pm to 5:00 am). This evening traffic will be distributed across four access location and consists of both entering and exiting vehicles. Relative to the site's day time and peak hour traffic generation, these volumes are considered minor.

Given this technical assessment of a one percent increase in traffic volumes, the social impacts will likely be minimal.



Issue

The SIA should include details of the social impacts due to provision of paid parking on the site and the mitigation measures to offset the identified impacts. This should be considered in the context of no regular public transport to the site.

Response

Cudgen Road and Turnock Street are part of an existing public transport route which includes public bus stops fronting the subject site.

Consultation has been held with Transport for NSW and Surfside and will be ongoing to ensure appropriate public transport updates and provisions are in place to support the Tweed Valley Hospital.

Further to the EIS submission, a Transport, Access and Parking Working Group has been established to review car parking demand, supply and operations. The working group will review impacts that the Project may have on the on-street parking supply and on nearby off-street car parks (including the Kingscliff TAFE car park). The working group will investigate and develop strategies to determine the appropriate parking provision and address parking impacts to the surrounding area. The working group will also review proposed on-site parking operations. It is noted that this work will be undertaken and submitted as part of the Stage 2 SSDA and is therefore not addressed in detail as part of the work to date.

Issue

The submitted SIA states that there are certain services in the existing hospital that would not be included in the future hospital. The SIA also includes a list of the facilities. The Response to Submissions should identify the anticipated impacts on the community due to deletion of these facilities from the future hospital and the measures proposed to mitigate or offset the identified impacts.

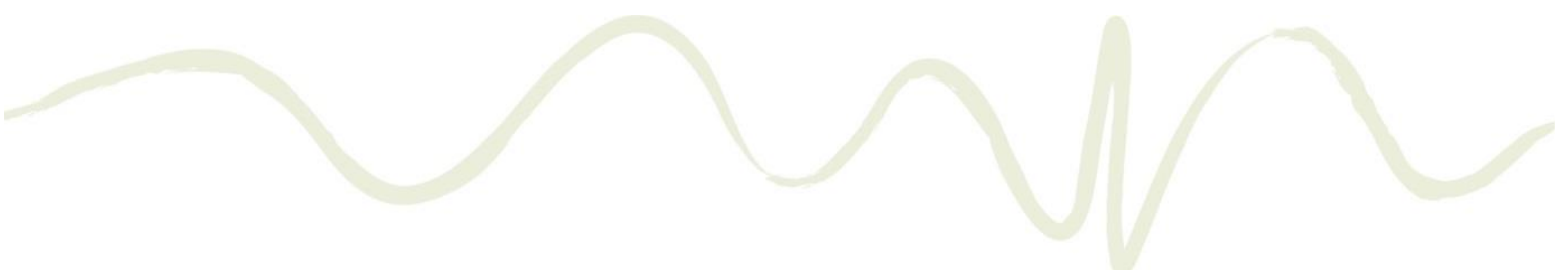
Response

The SIA notes that a number of services that are currently being provided/ are located at the Tweed Hospital do not currently form part of the scope of services at the Tweed Valley Hospital Site. Specifically, these services include:

- Community Health
- Oral Health (non-surgical)
- Breast Screen services
- The Tweed Clinical Education and Research Institute (TCERI)
- Ambulance Station.

The SIA recommended that these services would be best delivered in, or collocated with, a community health facility located in or close to the Tweed Heads Town Centre. It is therefore assumed that these services will remain somewhere within the catchment. The SIA is not suggesting that any of these services will be deleted or become unavailable to the local community.

NNSWLHD is planning the establishment of the HealthOne facility in Tweed Heads with services that will complement those at TTH. The scope and scale of the HealthOne facility will be further developed in coming months, but the HealthOne will provide Community and Allied Health services to the population of Tweed Heads, Tweed Heads South, Tweed Heads West, Terranora and Cobaki.



The following services are being considered:

- Aboriginal Health and Integrated Aboriginal Chronic Care (IACC)
- BreastScreen
- Child and Family Health services
- Chronic Disease Management
- Community Nursing and Breast Care
- Day Therapy
- Hospital in the Home
- Harm Reduction, Needle and Syringe Program and HARP Health Promotion
- Older Person services
- Oral Health
- Podiatry
- Women's Clinic
- Clinics for Midwifery Group Practice.

Note that this list is currently in draft form pending further consultation.

The Tweed Heads area has a good supply of General Practitioners (GPs) and will provide an opportunity to further embed NNSW LHD approach to Integrated Care and improve integrated care between GPs, NNSW LHD Community and Allied Health services and other important service partners.

Moreover, the objectives of the NSW Integrated Care Strategy are to transform how to deliver care to improve health outcomes for patients and reduce costs deriving from inappropriate and fragmented care, across hospital and primary care services.

Stage 1 Works

Issue

The SIA does not identify specific receptors that would be adversely impacted by the Stage 1 works. This consideration should include, at a minimum, the North Coast TAFE, Kingscliff High School, Kingscliff Library, several residential areas and the commercial areas that incorporates several amenities including Kingscliff Community Health Centre. The SIA should identify these (and any other) receptors and list the predicted impacts for each receptor.

Response

SGS Economic and Planning are not aware of any evidence which suggests that construction would adversely affect any of the above groups in addition to what is already identified in the SIA. That said, if there is further information which arises that identifies specific issues which should be considered for those receptors that differ from those identified in Section 3.2 of the SEIA, the SEIA should be updated to reflect the new evidence.

The Project Team has undertaken initial consultation with adjoining landowners and neighbouring residents, detailed further in Section 2.5 of the Land Use Conflict Risk Assessment (LUCRA) submitted with the EIS. Further targeted consultation may be undertaken to investigate in more detail exactly how this impact will affect these surrounding areas and to help determine what sort of targeted mitigation measures would be best suited to minimising these impacts on adjoining land owners.



Issue

The SIA does not acknowledge that there is a broader area which would be affected by the noise, dust and traffic during the construction works during Stage 1 and the construction works for the future hospital. The SIA should specifically identify areas that would be impacted upon, specifically by dust, while being located at a certain distance from the site (due to topography and wind direction), if not mitigated.

Response

Impacts from noise, dust and traffic as a result of the Stage 1 works has been addressed in the EIS and the Response to Submissions Report by specialist noise, dust and traffic consultants. Construction impacts will be managed under a Construction Environmental Management Plan (CEMP).

Issue

The EIS notes that Stage 1 construction will be undertaken over 10 months which includes several noise generating activities including pile driving and rock crushing. In addition, consent is sought for extended construction hours on a Saturday between 8am and 4pm. The SIA has not considered any social impacts due to these activities, although significant concerns are identified in the Community Consultation Report submitted with the EIS.

Response

The SEIA identifies that surrounding areas will be negatively impacted by noise, heavy vehicle movements and temporary traffic impacts during construction. The Project Team has undertaken initial consultation with adjoining landowners and neighbouring residents, detailed further in Section 2.5 of the Land Use Conflict Risk Assessment (LUCRA) submitted with the EIS. Further targeted consultation may be undertaken to investigate, in more detail, exactly how this impact will affect these surrounding areas and to help determine what sort of targeted mitigation measures would be best suited to minimising these impacts on adjoining land owners.

Issues associated with noise, dust and traffic are addressed in the EIS and RTS. As part of the Response to Submissions, proposed construction hours on Saturdays from 8.00 am to 4.00 pm have been revised to 8.00 am to 1.00 pm. This is in line with standard construction hours and the Environmental Protection Agency (EPA) recommendation.

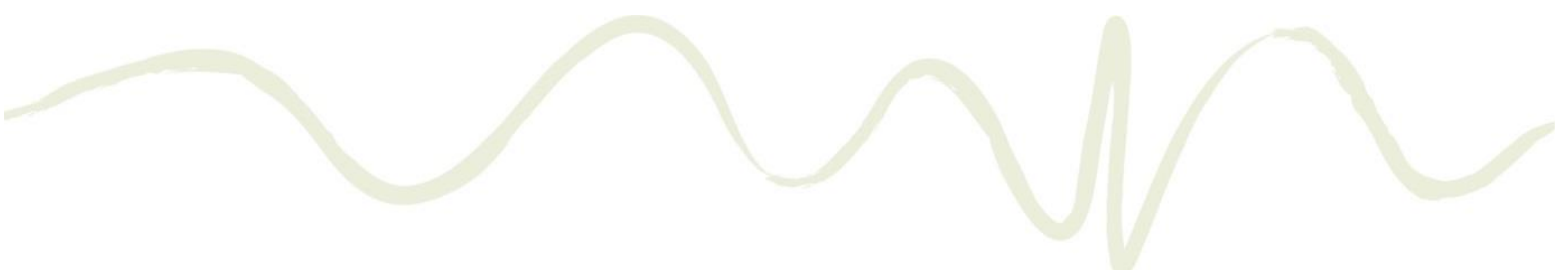
Since the submission of the EIS, additional geotechnical investigations have been carried out and confirm the quantity of rock being excavated is much less than assumed, following the initial investigation. Bonacci Group, as the project civil engineering consultant, have noted that if the Contractor utilised the services of a rock crushing plant, the plant will be located away from sensitive receivers (residential, commercial and educational facilities).

Issue

The SIA does not address the number of construction workers and whether they will be locally sourced, as this would have a knock-on effect in economic benefits and potential negative impacts.

Response

Employment during the construction phase of the project is addressed in the Economic Impact Assessment. The modelling in the EIA identified a range of GRP and employment related flow on impacts to the NSW economy which are all positive.



While there is no obligation to specifically employ workers from the local region, this issue is acknowledged and supported. The selected contractor has developed a plan to identify and implement local industry capability strategies to encourage local industry participation, create local employment opportunities and identify potential opportunities to enhance training and skilling to support the local workforce.

At present, the main challenge to local industry participation in the Tweed Valley region is the amount of employment that the Gold Coast provides for Tweed-Byron residents. In 2014, according to the NSW Department of Employment, 22 percent (6,300) of employed people living in Tweed Region work in the Gold Coast.

Effectively, the Tweed-Byron Region is a net exporter of skilled workers to other regions. This means that other LGA's (incl. in QLD) are getting the benefit of the significant experience which lives in the Tweed-Byron region.

HI's vision for the Tweed Valley Hospital project is that it creates opportunities for local employment and local industries during the construction phase, as well as long-term benefits to the Tweed-Byron region.

Further analysis has been undertaken assessing the industries of employment of residents in the region which indicates that 13 percent of those living around Tweed Heads-Coolangatta are employed in the Construction industry.

Issue

The SIA does not identify or assess impacts of the construction on specific sensitive times such as high tourism seasons or examination times in the TAFE.

Response

The SEIA was undertaken without certainty around construction timing and its alignment with tourism seasons. The SEIA does acknowledge the impact of temporary traffic measures on the area during construction.

The construction project will occur on a single self-contained site and will not adversely impact peak tourism seasons in the broader area.

As mentioned above, TAFE is one of the key stakeholders being consulted with. The Project Team will put communication protocols in place during construction for TAFE to report if noise is excessive during exams.

4.4.1.7 Traffic Assessment

The following provides responses applicable to the Traffic Impact Assessment (TIA). For full detail and responses, refer to the traffic and transport response at **Appendix N**.

Concept Proposal

Issue

Please clarify whether the cumulative traffic impacts considered by the Traffic Impact Assessment Report (TIA) includes traffic associated with the support building for the ancillary services.



Response

The cumulative traffic impacts considered by the Traffic Impact Assessment Report (TIA) includes traffic associated with the support building for the ancillary services.

Issue

Please clarify whether the TIA includes details of works referred to as “Upgrade 1 works” and then proposes “Upgrade 2”. Please clarify whether the TIA assumes that the Upgrade 1 works are to be undertaken by Tweed Shire Council or other.

Response

It is not considered practical to undertake the works nominated as Upgrade 1 and then Upgrade 2 as separate packages given the similarity of scope and nature of upgrades. The nominated upgrades demonstrate the capacity improvements required for background traffic volumes as well as design traffic volumes to operate within acceptable performance limits. A range of intersection upgrades are proposed which generally align with those nominated as “Upgrade 2” are being investigated. As outlined in **Section 5**, the recommended upgrade works to Tweed Coast Road/Cudgen Road intersection to cater for background and design traffic at year 2023 are to be included in the SSDA and form part of the Concept Proposal. The upgrades would be undertaken by Health Infrastructure as part of the Project. The Tweed Coast Road/ Cudgen Road intersection upgrade as recommended by the TIA has been assessed as part of the Concept Proposal in **Section 6**, with associated works to be assessed and undertaken in Stage 2.

NSW Health Infrastructure and the project team have worked closely (and will continue to do so) with Council to ensure that upgrade works are commensurate with Council’s ultimate plans for Tweed Coast Road. NSW Health Infrastructure is also working with Tweed Shire Council and RMS with regards to the timing and delivery of these upgrades.

Stage 1 Works

Issue

The Traffic Impact Assessment Report (TIA) indicates that during Stage 1 works, an average of 180 truck movements are expected per day but does not include information regarding the duration of the construction period. The duration of the Stage 1 works should be identified and then the impact of the movement of 180 trucks during that period of time should be assessed

Response

It is understood that the construction period for Stage 1 is approximately 10 months. The TIA provides an estimate of daily traffic volumes associated with the construction period based on the scale of the works. Detailed construction methodologies and documentation are prepared by the construction contractor. These methodologies are required to inform more detailed construction vehicle movement information. Further, construction traffic movements are expected to be significantly lower than traffic movements associated with the operation of the Tweed Valley Hospital (design traffic volumes). Noting the impact and outcomes of the design traffic assessment, the impact of construction traffic associated with Stage 1 is expected to be minor. Further, construction traffic will be managed as part of a CTMP.



Issue

The TIA also includes the details of average daily truck movements in lieu of the worst-case scenario. The maximum number of truck movements that can be expected on a day should be provided.

Response

As above, without detailed construction methodologies, specific traffic movements associated with construction works are preliminary estimates. The assessment is based on reasonable assumptions about expected movements, including similarly sized hospital construction projects (Maitland Hospital). It is re-iterated that construction traffic will be managed as part of a CTMP. It is expected that the CTMP will manage peaks through delivery and staff scheduling (i.e. thus limiting specific peak profiles and impacts). Further assessment and updates would be provided for Stage 2.

Issue

The TIA for the Stage 1 works does not identify whether the average 180 trips per day is predicted to have an effect on the LoS of the nearby intersections. This should also be done with the worst-case scenario considering the maximum number of trips per day.

Response

The TIA identifies that there may be some impacts in terms of delays (and therefore level of service) as a result of construction activities associated with Stage 1. Based on the volumes relative to the assessment of the operational phase of the Tweed Valley Hospital, these impacts are expected to be minor. It is expected that the CTMP, under which construction works will be undertaken, will manage peak construction traffic movements through delivery and staff scheduling.

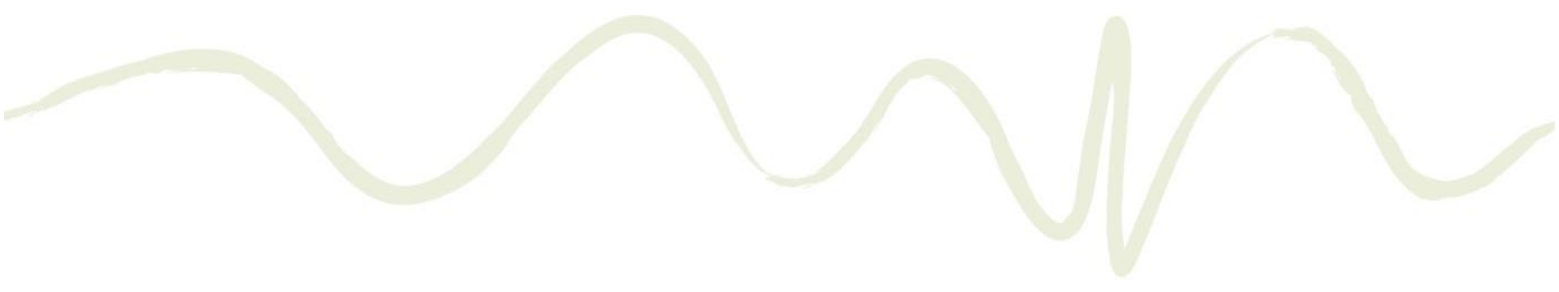
Issue

The EIS notes that there will be 21,159m³ of excess spoil which is required to be moved off site. Please clarify whether the predicted construction truck movements include the vehicles that would be removing the fill from the site.

Response

Further design work has been undertaken on the cut and fill requirements of the Project. This is detailed in the civil and structural engineering response to submissions (refer **Appendix G**). The total cut volume has been reduced from approximately 140,000m³ to 109,000m³ and the total fill volume has been reduced from approximately 119,000 m³ to 64,000 m³, resulting in a net cut surplus of approximately 45,000 m³. As can be identified in drawing C011 (refer **Appendix B**), it is now proposed to retain as much excavated material onsite for future reuse although some off-site disposal may be necessary but is not considered that this will be significant.

The excavated material will be temporarily stockpiled within the landscaped areas with appropriately managed dust, soil and water management controls as described in Appendix G.



These controls will be comprehensively documented in the CEMP for the Project along the following principles:

Construction Traffic

The contractor will implement a truck movement assessment and devise a methodology that reduces the intensity and timing of the fill deliveries. This will include an assessment of peak traffic times and options to spread out the number of truck movements over longer durations.

Reduce volume of stockpiling

One approach to mitigate negative effects of stockpiling is to reduce the volume of stockpiling required in the first instance. An “only as required” approach to stockpiling will be implemented which will reduce the volume of stockpiling on site at any given time.

Dust management

Appropriate dust control measures will be implemented for example wetting down with recycled water for during fill deliveries and any times stockpiles are uncovered. Whenever practical, height of stockpile mounds to be reduced to mitigate impact of wind and run off water.

Stormwater runoff management

Dependant on the duration of stockpile, the contractor would apply a combination hydromulch and or geo textile wrap over any fill being stockpiled. These measures will also assist in stabilising the outlet layer of the stockpile and will control the creation of dust. Stockpile locations will have temporary run off water channels connected to the site temporary stormwater system which is connected to sediment basins.

Truck movements and pedestrian safety

Appropriate separation, access routes, pedestrian protection (i.e water barriers and crossing points) will be implemented into our site traffic management plan to ensure safe pedestrian movements are maintained during stockpiling and material redistribution.

Issue

The anticipated size of the construction trucks associated with each activity should be included.

Response

Expected vehicle sizes associated with construction traffic movements are summarised in Section 6.4 of the TIA. Additional information for specific vehicle requirements will be detailed in the construction methodologies prepared by the construction contractor. In lieu of this, some typical vehicle types used during construction are summarised below:

- Tipper trucks – in the order of eight metres to 12.5 m length. Used for transporting spoil, fill, materials, equipment and plant;
- Truck and dogs – up to 19 m length. Used for transporting spoil, fill and other materials, equipment and plant;
- Articulated Vehicles – typically 19 m. Used for transporting materials, plant and equipment (e.g. low-loaders);
- Medium Rigid Vehicles – typically 8.8 m. Used for transporting equipment and materials;

- Small Rigid Vehicles – typically 6.4 m. Used for transporting equipment and materials;
- Light Vehicles – cars, vans utes etc. Predominantly used by construction personnel.

Vehicle movements and access will be managed under the CTMP. If oversize and/or over mass vehicles and loads are required, approval will be required from RMS

Issue

Please provide details of the number of on-site car parking spaces for the construction workers to be provided in Stage 1 works.

Response

For all stages of construction, the principal contractor has advised that the future permanent carparking areas will be prioritised to enable their use for Workers Carparking. During Stage 1 Early Works, labour peak is estimated to be around 40 to 50 workers, with 25 to 40 cars expected on-site. During Main Works (Stage 2), labour is estimated to peak just over 400 workers, with some 250 to 300 cars expected on-site. During both stages parking will be accommodated within the site.

4.4.1.8 Air Quality

Stage 1 Works

Issue

The Air Quality assessment and the source of potential impacts needs to include a comprehensive assessment of:

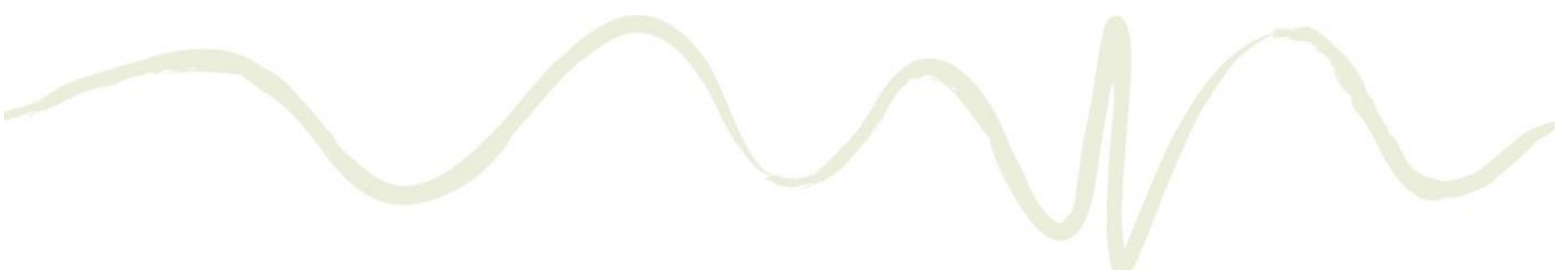
- *rock crushing activities on the site;*
- *dust impacts due to substantial amounts of cut and fill operations;*
- *haulage of 21,159m³ excess fill off-site; and*
- *associated stockpile management.*

The following supporting information would be needed:

- *the location of the rock crusher;*
- *approximate volume of rocks to be crushed based on the cut and fill volume;*
- *specific mitigation measures considering air quality impacts in the locality;*
- *the extent of haul roads required;*
- *stabilization of stockpiles and haul roads (with any dust suppression techniques involving water also to be linked to water management and erosion and sediment control sections);*
- *approximate area of open excavation and the management of this area in terms of dust generation; and*
- *additional management measures when adverse meteorological conditions aggravate potential dust issues.*

Response

Additional geotechnical investigations have been carried out on-site to better understand the geological profile of the site. In summary, the investigations confirmed that the site profile is highly varied with intermittent bands of shale rock. The quantity of rock being excavated is much less than assumed following the initial investigation.



Noting the above recommendations, prior to construction, the Contractor will develop a Dust Management Plan as a sub-plan of the Construction Environmental Management Plan (CEMP).

Preliminary assessment concludes:

- Due to the high variability of the location and quantity of shale rock, or more importantly hard shale rock, it is difficult to predict the quantity of rock needing to be crushed, if any. The quantity of rock being crushed, if any, will be determined during excavation.
- Air quality and specifically dust control measures proposed include the use of a water cart and where applicable if soil is stockpiled longer term, spray grass to stabilise the soil mounds including temporary stockpiles.
- Haul roads will generally follow the future road network shown in the attached drawings. Mitigation will be outlined in the Dust Management Plan, however includes the use of a water cart, dampening the soil to reduce the quantity of dust production.
- Soil and Water management will be in accordance with the NSW Landcom Bluebook. Water management will also aim to use rainwater and reuse water where possible.
- If the contractor utilises the services of a rock crushing plant, the plant will be located away from sensitive receivers (residential, commercial and educational facilities).
- Adverse meteorological conditions producing dust issues will be controlled with the use of water cart and spray seeding the site where possible to stabilise the soil and reduce dust and sedimentation runoff.

The following measures would be included to manage dust.

Rock crushing:

The type and size of rock crushers are yet to be determined. The rock on-site varies significantly depending on the relative location, from very weather rock to fresh high strength rock. This, in addition to finalising the subgrade levels (RL's) make it difficult to predict the quantity of rock to be crushed.

The management plan will include:

- Irrespective of the size and numbers, rock crushers will have a water attachment for dust suppression at the source. The water is sprayed at the face of the crusher before, during and after the crushing.
- Crushers will be located as far as practicable from Cudgen Road and immediate neighbours (i.e., on the north-west area of the site).
- All crushed rock suitable for re-use will be recycled on-site as fill, sediment control, pavements, hardstands, construction exits and pipe bedding materials.
- Where possible, the oversize material from hard rock projects is also reused for vehicle entry shake downs and erosion control.

Dust Management:

- Watercarts/water trucks will be in permanent use on-site during excavation and civil works.
- Temporary stockpiles that are not required for imminent use will be stabilised with spray grass or appropriate fabric.
- Continuous monitoring of weather forecast to stop dust generating activities in case that high winds are expected.
- Before extended breaks (e.g. Easter, Christmas), areas will be treated with spray grass.
- Only those areas where immediate structures are to be build will be stripped. Areas will be stripped at the latest possible date to comply with the program.
- Construction haul roads and temporary carparking will maximise the use of permanent infrastructure. These roads/carparks will have a sacrificial seal to minimise dust generation.



4.4.2 Other Matters

4.4.2.1 Site Area

Request for clarification

It is noted that the lot numbers have been amended due to the recent acquisition of part of the property. Please confirm if the site boundary of the project has been amended or whether it is part of the parent allotment. If the project boundary has changed, then please provide the Department with an amended site plan indicating the new lot numbers and the site area of the acquired lot.

Please clarify whether the area of the site is 19.4 hectares.

Response

The site boundary of the acquired site has been amended as part of the acquisition process. The updated deposited plan can be found at Appendix 1 of the Waste Management and Other Responses Report (attached at **Appendix O**) and confirms the acquired lot (Lot 11) is 19.38 hectares. The updated survey of the site is also attached at **Appendix C** of this report.

Request for clarification

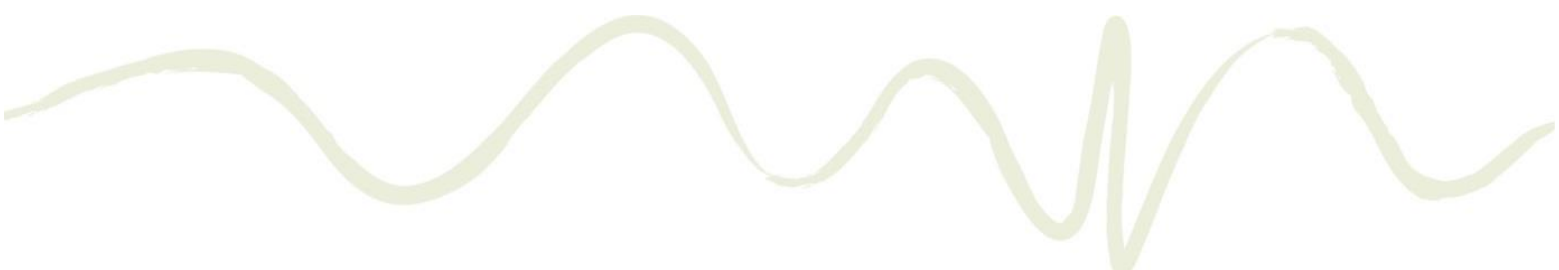
The EIS indicates that the sediment basins are to be constructed on the site as preliminary works (not part of this application). However, the Review of Environmental Factors (REF) indicates that the location and volume of the sediment basins approved as part of the REF are not the same as the sediment basin diagrams that are provided the "Stage 1 drawings" in the EIS.

Should the required sediment basin diagrams not match those determined by the REF process, then these should be included in the Stage 1 works and the plans should be amended to include the basins.

Response

HI's expert stormwater engineering and ecological position is that the erosion and sediment control works are necessary, and have been sized appropriately, to mitigate pre-existing environmental and ecological risks at the Site in its current state, regardless of any future use of the Site, and are presently being carried out on this basis. The on-going land management of the Site prior to development is also relevant in this regard. The entire erosion and sediment control works, as relating to the existing Site and proposed hospital development, were originally planned to be included in the SSD Stage 1 Early Works. However, in developing the EIS, it became clear that there was an immediate need for stormwater management works in relation to the unimproved Site, and these works have been confirmed as appropriate and necessary irrespective of future use of the Site. These were accordingly assessed and approved under Part 5 of the EP&A Act (REF) and includes the construction of four sediment basins as part of separate preliminary works to control the existing sediment runoff resulting from the former agricultural use.

The basins constructed for immediate environmental management purposes under the preliminary works will function as sedimentation basins prior to Stage 1 works associated with the SSDA. They will be augmented by the construction of a fifth sedimentation basin and associated stormwater management infrastructure during Stage 1 Works of the SSD as part of the Soil and Water Management Plan for the Project. At the completion of the future Stage 2 (construction of the hospital building and associated infrastructure, not part of this application), the four basins will be converted to bioretention/on-site detention basins and augmented where needed to limit post development



stormwater discharge to the existing pre-development discharge rates and the water quality will satisfy Tweed Shire Council requirements.

The Concept Proposal and Stage 1 Early Works plans have been updated to reflect the location and size of the sediment basins approved under a REF and being constructed as preliminary works, and incorporated them into the Soil and Water Management Plan for the Project (refer **Appendix B and G**).

4.4.2.2 Replacement Planting

Request for clarification

Section 3.2.2 notes that several trees would be removed including some of moderate retention value. In this regard please provide details of replacement planting with an offset ratio that would be proposed in Stage 2.

Response

It is intended that all trees with moderate to high retention value will be retained wherever possible as the design develops. Two trees of moderate retention value are currently proposed for removal. The current landscape proposal being developed will see a significant net increase in total trees on the site, including several hectares of native landscape areas, which will include a diverse mix of native tree species at densities appropriate to landscaping requirements (including APZ, agricultural buffers, sight lines). The detail landscape design will be developed and be submitted for approval as part of the SSD Stage 2 planning submission.

4.4.2.3 Construction jobs

Request for clarification

Please indicate the construction jobs likely to be generated for the Stage 1 works.

Response

It is estimated the construction phase of Stage 1 will generate approximately 380 full time equivalent (FTE) jobs.

4.4.2.4 Capital Investment Value

Request for clarification

Please provide details of the Stage 1 (early and enabling works) CIV separate to the Concept Proposal CIV.

Response

The Capital Investment Value (CIV) for the Tweed Valley Hospital including the Stage 1 Works is commercial-in-confidence and will be provided separately to DPE as part of the documentation associated with lodgement of the Submissions Report.



4.4.2.5 . Site Contamination

Request for clarification

Please clarify and provide supporting evidence to justify why the contamination on the site has been considered to be a Category 2 remediation work for which consent would not be required.

Response

SEPP 55 states that Category 2 remediation work may be carried out without development consent, provided the work is undertaken in a manner consistent with SEPP 55 and the council's policy on contaminated land.

Contamination in relation to the Project Site was addressed in Section 5.12 and Appendix R of the EIS. Based on the investigations carried out by OCTIEF, the site was considered suitable for the proposed purpose (hospital), subject to implementation of a Remediation Action Plan (RAP) for a small area of soil affected by Asbestos Containing Material (ACM) adjacent to the main shed. Contamination is estimated to be less than 100 m³ of soil, limited to the apron of the farm shed, to an approximate depth of 0.3 m.

The RAP by OCTIEF (included in **Appendix F**) outlined remediation works which were considered Category 2 work under SEPP 55. The remediation strategy included excavation and disposal of asbestos contaminated soil to the west of the farm shed.

Remediation undertaken to date on the Project Site is consistent with the 'secure and make safe' basis for preliminary works and includes:

- stripping asbestos containing material (ACM) from house and shed and surrounds;
- stripping of lead paint affected panels inside the house;
- removal of structures and on-ground slab;
- temporarily encapsulate previously identified ACM soil and contain in geotextile with hazard signs and fencing;
- further soil contamination sampling including under building/slab and in farm dump area. No asbestos was observed or found during testing related to the farm dump area; and
- making safe all other areas of suspected contamination with geotextile, hazard signs and fencing.

Whilst remediation work undertaken to date on the Project Site is consistent with the 'secure and make safe' basis for preliminary works, in response to submissions and agency advice, remediation work for the soil adjacent to the shed is now proposed to be included in the SSDA and undertaken as part of the Stage 1 Works (outlined in **Section 5.5**). This would be in accordance with the RAP prepared by OCTIEF and a subsequent RAP prepared by Cavvanba (both included in **Appendix F**). The most recent RAP prepared by Cavvanba supports the OCTIEF RAP and the remediation strategy proposed. The remediation work to be part of Stage 1 and RAPs are further discussed in **Section 6.3**. A Site Audit Statement is also to follow and will be provided to DPE as soon as it is available.

4.4.2.6 REF and Upgrade works

Request for clarification

Please provide a consolidated and updated outline of the details of the REF works and the timing and status of such works. Please provide details of any additional works proposed as part of the Stage 1 works in lieu of preliminary works (not identified in the EIS).



Response

The EIS outlined that following acquisition of the Project Site, Health Infrastructure would undertake preliminary works to secure the Project Site, establish access, improve certain road infrastructure and adjust services, and ensure appropriate environmental control measures are in place. These would be separate to and in advance of the Tweed Valley Hospital Project. The preliminary works would be undertaken in accordance with exempt and complying development codes or Part 5 of the EP&A Act. As outlined in the EIS, the preliminary works that were originally proposed to be considered and undertaken under Part 5 and assessed in a REF included:

- Soil and water management works including sediment basins and associated works to mitigate impacts of stormwater runoff from the unimproved site;
- New site access point from Cudgen Road at south-western site boundary;
- New site access point from Turnock Street roundabout, including intersection improvement works, electrical connections for street lighting and a new water main connection beneath the road/ intersection;
- Upgrading the Tweed Coast Road/ Cudgen Road intersection to provide a better level of service.

Following further advice, consultation and consideration of submissions, the abovementioned road works were not included in the REF and only the critical soil and water management works have been assessed under a REF and determined to commence under Part 5 of the EP&A Act. This is to address the immediate need to mitigate existing runoff and sedimentation impacts from the current unimproved condition of the land. The works included in the REF are:

- Earthworks and construction of four sediment detention basins with a total capacity of approximately 6,457 m³ to capture stormwater and sediment runoff from the site; and
- Revegetation of the site by grass seeding to mitigate potential impacts of stormwater runoff.

These works are well underway and being constructed in accordance with the REF and the Issued For Construction (IFC) drawings. They are expected to be completed in February 2019.

Given the above, the site accesses and road works are to be included in the SSDA. **Section 5** outlines the changes in response to submissions, including the inclusion of aspects/works that are no longer proposed as preliminary works. This includes:

- Confirmation and inclusion of Tweed Coast Road/ Cudgen Road intersection upgrade in the Concept Proposal (as identified and recommended in the TIA), with works assessed and undertaken as part of Stage 2
- Inclusion of west (access 'A') and east (access 'D') site access points and associated road works in the Stage 1 Works scope
- Undertake soil remediation works as part of Stage 1 Works scope in accordance with Remediation Action Plans (RAPs) prepared by OCTIEF and Cavvanba.

An updated package of plans/drawings can be found at **Appendix B** of the Submissions report and for completeness assessment of the above components is provided in **Section 6**.



5. Changes to the Project

DPE has provided correspondence to Health Infrastructure as the applicant, confirming the receipt of submissions and that in accordance with clause 85A of the EP&A Regulations 2000 the Secretary (DPE) requires the applicant to respond to all issues raised in these submissions and Government agency advice, and where necessary revise documentation. In addition, DPE have undertaken a preliminary assessment of the EIS and, in addition to matters raised by agencies, require a number of issues to be addressed (refer to Section 4.4). On this basis, a number of changes have been made to the Project and revised / supporting documentation provided in response the DPE request and public and government agency submissions. This includes Concept Proposal refinement and additions to the Stage 1 Works scope.

An amended plan package has been prepared and is provided at **Appendix B**. A summary of the key changes in response to submissions and issues raised is set out in this section of the Submissions Report. The primary changes include:

- Amendment and refinement of the Concept Proposal and Stage 1 Works, including additional information in response to agency and DPE comments, as well as public submissions;
- Addition of site access and associated external road improvement works to the Stage 1 Early and Enabling Works scope (these are described in more detail at Section 5.2). These works were originally planned to be undertaken as part of the Preliminary Works and include:
 - Addition of new site access point from Cudgen Road at the south-western boundary of the Project Site (referred to as access 'A' on plan AR-SKE-10-007 rev.2);
 - Addition of new site access point from Turnock Street roundabout to the Project Site (referred to as access 'D' on plan AR-SKE-10-007 rev.2), including associated intersection improvement works, electrical connections for street lighting and a new water main connection beneath the road/intersection.
- Undertake soil remediation works as part of Stage 1 Works scope in accordance with Remediation Action Plan (RAP) prepared by OCTIEF and Cavvanba. These works were also originally planned to be undertaken as part of the Preliminary Works.

The upgrades to the intersection of Tweed Coast Road/ Cudgen Road (and approaches) that were recommended by the TIA provided with the EIS are not included in the Stage 1 works associated with this application. While these will provide a better level of service these works would be part of Stage 2 given they relate to an interim upgrade of the intersection to support operation of the hospital. However, for the purposes of completeness and in response to feedback on the EIS, the impacts of these works have been assessed as part of the assessment of the Concept Proposal.

These changes are described in more detail in the following subsections. A full set of updated proposed plans is attached as **Appendix B**.

5.1 Summary of Design and Plan Changes

This section provides a summary of design and plan changes as a result of design progression and in response to issues raised during the exhibition period. A full set of updated plans is provided at **Appendix B**.



These changes include:

- Further definition and assessment of the main hospital and health hub program;
- Consolidation of the campus master plan;
- Validation of the hospital block and stack arrangement to support the health facility planning;
- Development of a building chassis that supports the health facility planning and the integration of an appropriate urban and architectural design response;
- Further analysis and identification of the place-making opportunities afforded by the project and the development of landscape design principles to support those opportunities.

5.1.1 Hospital Program Definition

Site master planning and concept design activities have progressed in parallel with the development of a detailed Functional Design Brief which will provide the basis for the preparation of a detailed schematic design in the next phase of the project. The Functional Design Brief is scheduled for endorsement early in 2019.

5.1.2 Campus Master Plan Consolidation

Following the initial site analysis and evaluation process, the project had previously identified a number of key context opportunities that should be leveraged when siting both the main hospital and indeed the broader campus in order to enhance the integration of the campus into the Kingscliff context. These opportunities included and also respond to comments by agencies:

- The environmental zone located immediately to the north of the site. This natural feature was seen to represent a number of place-making and wellness opportunities.
- Establishing a dialogue between the external build form located to the south and east of the site which was seen as an opportunity to contextualise the hospital campus.

The established barrier of low value non-indigenous planting located along the southern site boundary along Cudgen Road presents as a visual barrier between the north and south sides of Cudgen Road. The current concept design activities have further examined the merits of selectively removing elements of the barrier in order to improve the porosity of the Cudgen Road frontage and establish key sight lines across Cudgen Road, into the campus and indeed the main hospital through to the environmental zone. The proposed barrier selective removal and reconstitution as part of a consolidated landscape street frontage design to the hospital, both open important street views (providing visual permeability) of the hospital main entrance and support a public realm forecourt to the campus, activated by the proposed support (Health Hub) building that fronts Cudgen Road – refer **Appendix B**, Landscape Zonal Plan. The reconsolidated street edge landscaping in combination with the support building serve to maintain the proposed land-use conflict buffer. Further design resolution of this zone will be provided with the Stage 2 SSDA application.

In addition to further articulating the permeability of the Cudgen Road interface, the master plan has seen the consolidation of the civil design and integration of the landscape strategy. Specifically, the internal road network and car-park strategy has been further refined including the overlay of primary pedestrian pathways and bike paths, responding to submissions (including comments from the Government Architect). Refer to **Appendix B**, Architectural and Urban Design Response Report, fig-01 Proposed Indicative Pedestrian Network.

Within the landscape scheme these strategies emanate from the heart of the hospital and manifest themselves as:

- A primary external pedestrian pathway with an east-west axis that runs across the southern face of the main hospital and links the various at grade car-parks that flank the hospital with the various entries.
- A primary external/ internal pedestrian pathway with an east-west axis that runs through the heart of the hospital and links the various at grade car-parks that flank the hospital with the primary internal east-west circulation route.

The updated Master Plan-Concept Plan proposes three principal changes to the previous Concept Plan submitted with the EIS, including;

- Change to the form of the Maximum Planning Envelope:
 - Further consideration and revisions have been made where achievable to reduce the upper mass of the maximum planning envelope, more sensitively responding to the local context and submitter concerns. Consequently, some adjustments to the lower zones of the envelope have also been incorporated.
 - The proposed change also incorporates further resolution of the main hospital and support building (health hub) functional program.
- Minor change to the on-site road network alignments:
 - On-site road network designs have been refined to respond more closely to the site's existing topography, limiting excessive cut and fill. This has led to some minor circulation strategy changes however in general the design approach remains largely consistent with the Concept Proposal drawings previously submitted. The circulation layout provides for effective access and legible circulation for vehicles and pedestrians, including refined linkages.
- Modifications to the carparking configuration:
 - Linked to and affected by the refinement of the on-site road network alignments and levels, the surface carparking has also been modified.
 - Changes to the surface carpark include responding more closely to the site's existing topography in order to better accommodate pedestrian walking routes and landscape design.
 - Further design development of the surface carparking will occur which will be included in the Stage 2 SSDA submission.

5.1.3 Hospital Block and Stack Arrangement

The detailed analysis of the proposed hospital service plan has allowed the inter-departmental functional relationships to be defined. In turn this has enabled the reference design to progress the development of a building chassis that establishes the horizontal and vertical adjacencies required to deliver a functionally effective and operationally efficient healthcare facility.

Whilst still under development, the consolidation of the block and stack arrangement has enabled the anticipated overall building envelope to be further defined. The resultant reference envelope has seen a marked reduction in the overall volume when compared to that previously submitted with reduced density in the upper levels and a greater emphasis on maximising the lower levels and embedding into the natural slope of the land. It is anticipated that the facility envelope will continue to be reduced through the schematic design process, reducing visual amenity impact as raised in submissions.

The revised Maximum Planning Envelope, drawings AR-SKE-50-501 Revised Planning Envelope, Elevations and AR-SKE-10-010 Revised Planning Envelope, illustrates proposed modifications to the Maximum Planning Envelope. These modifications are as a result of:

- Consideration to reduce the mass of the upper levels of the Maximum Planning Envelope to help reduce the visual impact of the hospital and respond to submissions;
- Subsequent design refinement since submission of the EIS and following the exhibition period;
- Engineering design development, adopting visually concealed site infrastructure solutions;
- Greater use efficiency of the site slope and ridge topography.

An early block and stack building section form has been provided for information in **Appendix B**, drawing AR-SKE-51-003, to illustrate a “work in progress” building form as this is being developed within the maximum planning envelope. This section is indicative and will be revised as design develops but has been included to illustrate the anticipated reduced mass of the form compared to the maximum planning envelope within which it is to be developed. Detailed sections of the proposed hospital will be provided on completion of schematic design to be submitted with the Stage 2 SSDA.

5.1.4 Urban and Architectural Design Response

The urban and architectural design response has been further informed by submissions and a range of organisational principles including:

- The context response strategy that establishes visual connections between the surrounding neighbourhood, the hospital and the environmental zone located to the north of the site. This strategy suggests a framework for the organisation of external spaces, sight-lines and pedestrian pathways.
- The articulation of the block and stack arrangement has been developed based on a rigorous assessment of functional and operational objectives. This arrangement suggests a framework for the organisation of a plinth that will reconcile the various interfaces with a highly modulated topography, a podium that can be activated and address the human scale and the facility definition provided by the form of the overnight patient accommodation (In Patient Units).
- An urban response strategy that recognises the texture and scale of the regional built form. The resultant architectural response will be to develop a built form that presents the hospital as an ensemble of smaller buildings, reflective of the village scale of the area, all the while accommodating a technically complex, connected and integrated healthcare facility.

5.1.5 Place Making

Consideration of submissions and refinement of the Concept Proposal has enabled further consideration of how public spaces can be incorporated into the facility design. Additionally, the strategy of assembling a series of apparently smaller structures into a comprehensive whole, being the hospital, has facilitated the framing of these public spaces. The following areas will be further explored and developed as opportunities to create vibrant public spaces:

- The entry forecourt leading to the hospital, including in particular the areas adjacent to the Support Building (Health Hub) and in and around the main entry.
- The interface areas leading to the public entries located on both the eastern and western sides of the hospital.
- The northern terrace and garden area that will interface with the main hospital lobby.

These strategies will be further developed and articulated as part of the schematic design activities.



5.1.6 Stormwater and Sediment Basin Reconfiguration

As indicated in the EIS and further outlined in the Civil Engineering response at **Appendix G**, to control the existing stormwater and sediment runoff resulting from the former agricultural use, four basins are being constructed as part of separate preliminary works. These basins will function as sedimentation basins prior to Stage 1 works associated with the hospital and will be augmented by the construction of a fifth sedimentation basin and associated infrastructure during Stage 1 works to function as part of the Soil and Water Management Plan. At the completion of the future Stage 2 (construction of the hospital building and associated infrastructure), the four basins will be converted to bioretention/ on-site detention basins and augmented where needed to limit post development stormwater discharge to the existing pre-development discharge rates and the water quality will satisfy Tweed Shire Council requirements.

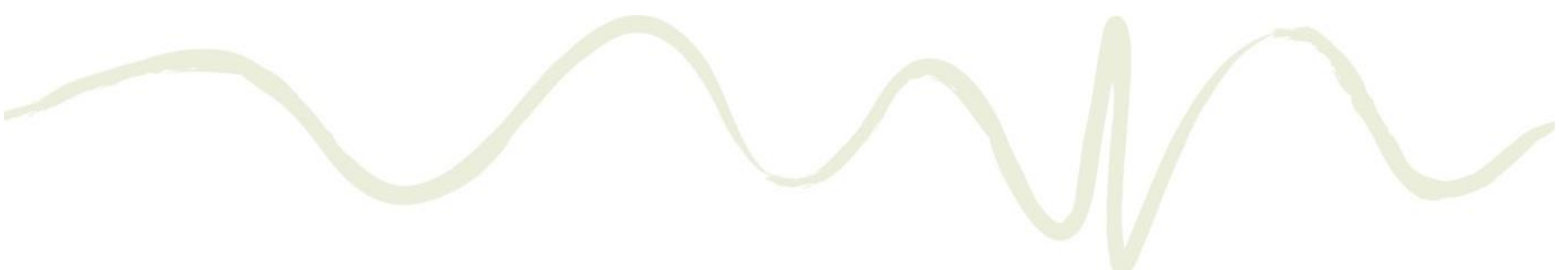
In response to submissions, and matters raised by DPE, the basins shown on the original Stormwater Concept Plan and Soil and Water Management Plan have been reconfigured and updated in the amended plan set to reflect the above described configuration. The change results in four smaller basins (rather than the original three) and the overall footprint of the basins has been reduced. Revised stormwater calculations and a Soil and Water Management Plan have been provided with the amended plan set (refer **Appendix B**). The four sediment basins are required to mitigate pre-existing environmental conditions on the site and are required for erosion and sediment control irrespective of the future use. The sediment basins have been constructed as part of the Preliminary Works and will be augmented for construction of the hospital as follows. The detailed Civil Engineering response to submissions is provided at **Appendix G**.

An additional sediment basin has been provided near Cudgen Road for erosion and sediment control during construction associated with Stage 1 Works. This basin is therefore temporary and would be removed following construction completion and disturbed areas stabilised.

5.1.7 Nature of Changes

The changes described above and shown in the revised plan package (**Appendix B**) are refinements and as a result of responding to submissions (including revisions to reduce/mitigate impacts), addressing matters raised by DPE and associated design progression. This is in accordance with clause 85A of the EP&A Regulations 2000 and the letter from DPE that outlines that the Secretary requires the applicant to respond to all issues raised in the submissions, Government agency advice and key issues raised by DPE, and where necessary revise documentation. On this basis, the previously described changes have been made and revised / supporting documentation provided in response.

The changes do not introduce any significant new elements or amendments that would notably alter the impact assessment undertaken as part of the EIS. Whilst the Project Site access points and associated road works are now included in the Stage 1 Works Scope, rather than separate Preliminary Works, these are not considered to be significant and were contemplated in the Concept Proposal that is being assessed as part of the EIS. Their inclusion also addresses feedback from further consultation and matters raised in submissions. Similarly, the Traffic Impact Assessment (TIA) supporting the EIS recommended an interim upgrade of the Tweed Coast Road/ Cudgen Road intersection. Whilst this upgrade is not proposed to be constructed until Stage 2, additional assessment has been provided in the context of the overall Concept Proposal for completeness and in response to submissions and consultation. Environmental assessment of the site access and road works is provided in **Section 6**.



Overall, the changes do not amount to a significant change to the Project or Concept Proposal and are considered to be consistent with the application as submitted for following reasons:

- The changes respond to government agency and public submissions and are as a result of associated design refinement post exhibition. They remain generally consistent with the overall Concept Proposal presented and assessed in the EIS.
- The changes are generally limited in scope and in the context of the overall Project involve minor alterations to the master plan configuration and maximum planning envelopes, as well as a reduction in the overall volume of the maximum planning envelope to reduce/mitigate associated impacts.
- The proposed changes would not result in additional significant impacts. The assessment and findings presented in the EIS remain valid, supported by further information and assessment as presented in this Submissions Report and requested by DPE.

5.2 Concept Proposal: Tweed Coast Road/Cudgen Road Intersection Upgrade

Based on the TIA and recommendations submitted with the EIS, the intersection of Tweed Coast Road and Cudgen Road (and relevant approaches) would be subject to an interim upgrade (in advance of the road's future duplication by Council) to provide a better level of service to road users. These recommended upgrades relate to the operational phase of the hospital as described in the TIA. In response to submissions and clarification sought by DPE, this Submissions Report confirms that the upgrades are part of the overall Concept Proposal and would be assessed in detail in the Stage 2 SSDA.

In summary the proposed intersection upgrade is expected to include:

- a new left turn and storage lane (southbound) - The new left lane road pavement extension would extend for up to approximately 300 m north of the intersection. A tree and woody undergrowth and weeds would be removed as part of these works;
- an extension of the short north lane (northbound) north of the intersection;
- reconfiguration of the westbound lane on Cudgen Road, west of the intersection;
- reconfiguration of the traffic lanes on the westbound approach on Cudgen Road;
- relocation of traffic light infrastructure;
- new stormwater infrastructure; and
- various services related works.

For completeness, an assessment of the upgrade in the context of the Concept Proposal is provided in **Section 6.1**, with further design detail and assessment to be provided in the Stage 2 SSDA.

5.3 Additional Stage 1 Works: Description of Site Access and Associated Road Works

The site access points (identified as 'A' and 'D' on the plans) and associated Turnock Street roundabout improvements were identified in the SSDA and EIS submission, with the east and west site access points forming part of the Concept Proposal. These components were originally proposed to be constructed separately as part of the Preliminary Works, however based on further advice and submissions, they are now to be included in the Stage 1 Early and Enabling Works scope. Further description of these works is below, and for completeness an assessment is provided in **Section 6.2**.



5.3.1 New Site Accesses and Turnock Street Roundabout Improvements

As described in the TIA supporting the EIS, a new eastern site access point will be created as an additional leg to the Turnock Street/ Cudgen Road roundabout. This would involve a new two-lane road connecting to the western side of the roundabout, allowing for ingress to and egress from the site at 771 Cudgen Road. A footpath connection and pedestrian refuge/ medium would be constructed as part of the new leg to the roundabout. Based on engineering advice, improvements to flow and safety of the roundabout would be undertaken, this largely involves line marking changes.

The road works and roundabout improvements would also involve service adjustments, and electrical connections for street lighting. A water main connection/ extension from the eastern side of Turnock Street would also be provided to the eastern boundary of the Site. This would be installed beneath Turnock Street and it is therefore important to be included in this stage.

A new western access point, including slip lane/ deceleration lane from Cudgen Road would be constructed and involve local road widening of the existing pavement. This road would be ingress only and comprise a five metre wide carriageway and deceleration lane to turn off from Cudgen Road into the Site. These works would include construction of kerb and gutter and realignment of the northern footpath and an associated pedestrian crossing of the new access road.

These access points/ roads stem from the overall Concept Proposal and are also required to provide safe access and egress for the Stage 1 Works. The proposed configuration of the slip lane for Access 'A' incorporates a higher order facility compared to a standard driveway crossover as typically stipulated under Council's Driveway Access to Property Specifications as it was designed specifically for use by authorised vehicles and primarily emergency/ Ambulance vehicles accessing the site via Tweed Coast Road (west). The justification is outlined in Section 6.2.3 and the traffic and transport response at **Appendix N**. As addressed in Table 4.2 (responding to submissions from Council) the design of the accesses and slip lane respond to Council officer comments and safety concerns. The design of Access A notes that RMS approved pedestrian fencing is to be installed adjacent to the ancillary lane to ensure that pedestrians cross at the pram ramp, appropriate pedestrian cyclist chicanes to be installed to RMS/Austrroads requirements and signage to be installed on the shared path advising of the road ahead. The design of Access D includes a continuous footpath connection as requested by Council officers. Council Technical Officers have noted acceptance of the design as documented in "Agenda – Ordinary Council Meeting Wednesday, 12 December 2018".

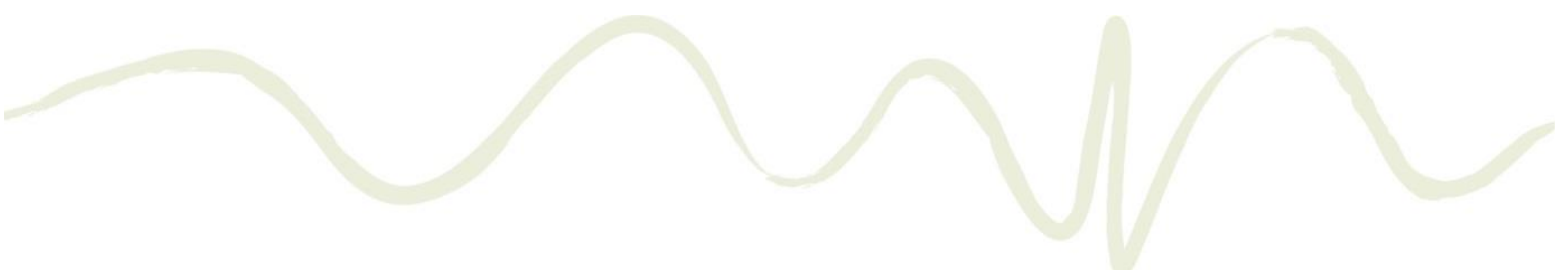
Any required road-related stormwater works (e.g. kerb/channel, drains, culverts and swales) would be undertaken in conjunction with the road works.

All vegetation to be removed as part of the Project including that required for the new access point at the Turnock Street roundabout and developing the slip lane and access at Cudgen Road has been assessed as part of the BDAR (refer **Appendix E**).

5.3.2 Work Methodology

The general work methodology for these additional works as part of the Stage 1 Works scope is summarised below:

- Site establishment.
- Implementation of environmental controls: Set up erosion sediment controls and issue notifications to sensitive noise receivers as required.
- Removal and mulching of applicable vegetation.
- Earthworks.

- 
- Trenching/ under-boring for services, including water connection across Turnock Street into site boundary.
 - Construct formal access points to site, intersection improvement, including any associated service adjustments/ works. This includes:
 - Removal of existing ground and formed pavements, preparation and rolling of subgrades, placement of gravel road bases, and rolling.
 - Placement of new stormwater drainage concrete pipework and pits, and formation of swale drains.
 - Placement of concrete kerb and gutters, pedestrian islands and concrete aprons or crossings.
 - Placement of asphalt with trucks and profile machine and rollers. Scarifying or vacuum blasting old road line marking off and new line marking.
 - Soil stabilisation and waste removal (as required).

The relevant proposed plans are included in the plan package at **Appendix B**.

5.3.3 Construction Hours

Construction hours would be as per the revised standard construction hours for the Project outlined at **Section 5.1.3**.

5.3.4 Earthworks

The road and services works, will require excavation and/or underboring to construct the new infrastructure, provide suitable road base and for the removal of unsuitable subgrade materials. Importation of base material would be provided where required for suitable foundations for the new roads and paths.

Material generated from trenching of the services would be used to backfill the trench alignments or may be reused elsewhere. Additional material (e.g. sand) may be required to be used within services trenching and will be sourced from licensed quarries and operators as required.

5.3.5 Source and Quantity of Materials

Excavated material/ spoil would be reused on-site where suitable and appropriate. Any required imported materials will be sourced from licensed quarries and operators. All materials will be certified uncontaminated and environmentally safe.

5.3.6 Traffic Management and Access

The main construction access to the Project Site and Stage 1 work areas will be via the Tweed Coast Road and Cudgen Road, including the Turnock Street intersection. Creation of the formal east and west access points will also provide for safe and effective construction access to the Project Site. Road and footpath traffic control and diversions will be required during the course of the construction period to accommodate the access and external road construction works and maintain traffic access and safety. A traffic management and traffic control plan would be prepared for all Stage 1 Works prior to commencement.



5.3.7 Ancillary Facilities

It is expected that the additional works will be supported by the main Project Site compound and stockpiles as shown in the Stage 1 application drawings.

5.4 Revised Construction Hours

In response to submissions received, the proposed construction hours for Stage 1 works have been revised. Namely the originally proposed extended construction hours on Saturdays (8.00 am to 4.00 pm) have been reduced to align with standard construction hours and EPA recommendations. The revised proposed hours are:

- 7.00 am to 6.00 pm Monday to Friday;
- 8.00 am to 1.00 pm Saturday, and
- No work on Sundays or gazetted public holidays.

5.5 Remediation Works in Stage 1 Scope

Contamination in relation to the Project Site was addressed in Section 5.12 and Appendix R of the EIS. Based on the investigations carried out by OCTIEF, the site was considered suitable for the proposed purpose (hospital), subject to implementation of a Remediation Action Plan (RAP) for a small area of soil affected by Asbestos Containing Material (ACM) adjacent to the main shed. The RAP by OCTIEF is attached at **Appendix F**. The RAP by OCTIEF outlined remediation works which are considered Category 2. The scope included excavation and disposal of asbestos contaminated soil to the west of the farm shed.

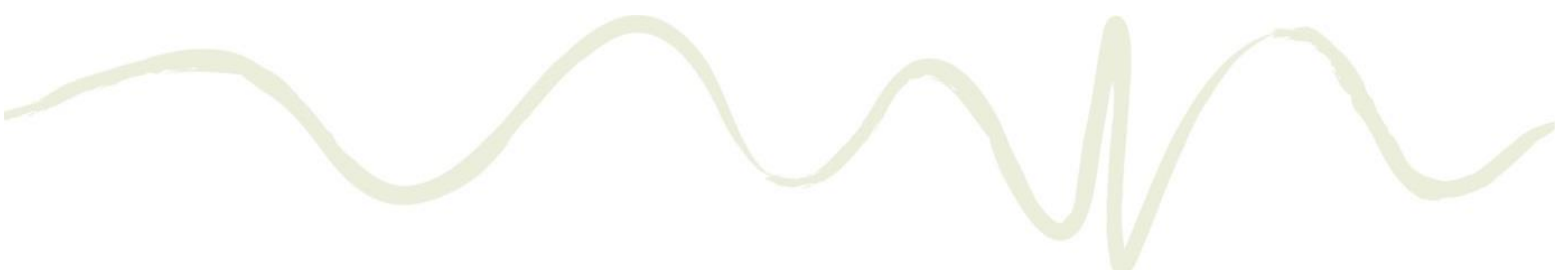
Remediation undertaken to date on the Project Site is consistent with the 'secure and make safe' basis for preliminary works and includes:

- stripping asbestos containing material (ACM) from house and shed and surrounds;
- stripping of lead paint affected panels inside the house;
- removal of structures and on-ground slab;
- temporarily encapsulate previously identified ACM soil and contain in geotextile with hazard signs and fencing;
- further soil contamination sampling including under building/slab and in farm dump area. No asbestos was observed or found during testing related to the farm dump area; and
- making safe all other areas of suspected contamination with geotextile, hazard signs and fencing.

Whilst remediation work undertaken to date on the Project Site is consistent with the 'secure and make safe' basis for preliminary works, in response to submissions and agency advice, remediation work for the soil adjacent to the shed is proposed to be included and undertaken as part of the Stage 1 Works. This would be in accordance with the RAP prepared by OCTIEF and the RAP prepared by Cavvanba (included at **Appendix F**). Given the remediation strategy is similar, the most recent RAP prepared by Cavvanba supports and supersedes the OCTIEF RAP.

Based on the results of the investigations conducted by Cavvanba and OCTIEF, contamination is estimated to be less than 100 m³ of soil, limited to the apron of the farm shed, to an approximate depth of 0.3 m.

The remedial strategy of off-site disposal is considered to meet the remedial requirements and be acceptable for the proposed development. The remediation work and RAPs are further discussed in



Section 6.3. Andrew Lau, of JBS&G Australia Pty Ltd (JBS&G), has been engaged by Health Infrastructure to conduct a site audit of the Project site. This audit involves a comprehensive review of all contamination reports undertaken for the project. JBS&G has issued an Interim Audit Advice (refer **Appendix F**) stating that provided updated reports are received that satisfactorily address comments issued by the auditor, it is anticipated that a Site Audit Statement (SAS) and accompanying Site Audit Report (SAR) can be issued for the Project site in mid-February 2019.

5.6 Other Matters

The originally submitted EIS and BDAR outlined that the existing farm dam located at the north of the Project Site will be filled to return that part of the catchment to a more natural flow regime. This component will be reviewed and addressed in Stage 2 as required.



6. Additional Assessment

This section provides additional environmental assessment of the items listed in Section 5 which have been included in the Project in response to the submissions. The additional environmental assessment supplements the EIS that was lodged with the SSDA for the Tweed Valley Hospital.

6.1 Concept Assessment of Tweed Coast Road/Cudgen Road Intersection Upgrade

This section provides an environmental assessment of the Tweed Coast Road/ Cudgen Road intersection upgrade as recommended by the TIA and described in the EIS. The required intersection works were originally going to be carried out as part of the Preliminary Works. However, following further advice, consideration of the submissions and consultation, these road works were not included in the REF. They are now proposed to be undertaken as part of the Stage 2 works and have been included and assessed as part of the Concept Proposal for the Project. The Tweed Coast Road/ Cudgen Road intersection upgrade has been assessed against the relevant SEARs identified for the Concept Proposal component of the Project.

6.1.1 SEAR 1 Statutory Planning

Comprehensive consideration of the statutory planning context for the Project has been provided in the EIS.

The Tweed Coast Road/ Cudgen Road intersection upgrade would occur within the existing road reserve. The area (road reserve) is zoned RU1 Primary Production and R2 Low Density Residential under the TLEP 2014. Roads are permitted with consent in these zones under the TLEP 2014.

Given the works occur within the existing road reserve they would not be inconsistent with the objectives of the applicable land use zones and are acceptable in this context.

The recommended/ proposed upgrade is to support the operation of the proposed Tweed Valley Hospital and form part of the SSDA.

6.1.1.1 *State Environmental Planning Policy (Coastal Management) 2018 (Coastal Management SEPP)*

The Coastal Management SEPP (as outlined in the EIS) aims to promote an integrated and co-ordinated approach to land use planning in the coastal zone in a manner consistent with the objectives of the *Coastal Management Act 2016*.

Coastal Wetland proximity mapping under the Coastal SEPP applies to part of the Tweed Coast Road/ Cudgen Road intersection upgrade footprint (refer to **Figure 6.1**). An assessment of the relevant development controls contained within the SEPP and how they relate to the Concept Proposal is provided below.



Division 1 Coastal wetlands and littoral rainforests area

The upgrade footprint does not affect mapped Coastal Wetlands or Littoral Rainforests. The northern extent of the upgrade footprint (refer to plans at **Appendix B**) extends along the road reserve into a coastal wetland proximity buffer of the “Coastal Wetlands and Littoral Rainforests Area Map”.

Clause 11(1) of the Coastal Management SEPP states that development consent must not be granted to development on land identified as “proximity area for coastal wetlands” or “proximity area for littoral rainforest” on the Coastal Wetlands and Littoral Rainforests Area Map unless the consent authority is satisfied that the proposed development will not significantly impact on:

- the biophysical, hydrological or ecological integrity of the adjacent coastal wetland or littoral rainforest; or
- the quantity and quality of surface and ground water flows to and from the adjacent coastal wetland or littoral rainforest.

Given the upgrade would occur within the highly disturbed road reserve, is not of a significant scope, and can be managed with standard construction and environmental controls, it is not expected that the upgrade would have any adverse impact on the nearby coastal wetlands. Environmental assessment in the context of the Concept Proposal is provided in the following sections in response to applicable SEARs. No adverse impact to biophysical, hydrological or ecological integrity, nor water quality/quantity, is expected. Additional assessment, including construction related impacts, would occur at Stage 2.

Division 2 Coastal vulnerability area

The upgrade area is not mapped as a “coastal vulnerability area”.

Division 3 Coastal environment area

The upgrade area is not mapped as a “coastal environment area”.

Division 4 Coastal Use Area

The upgrade area is not mapped as a “coastal use area”.

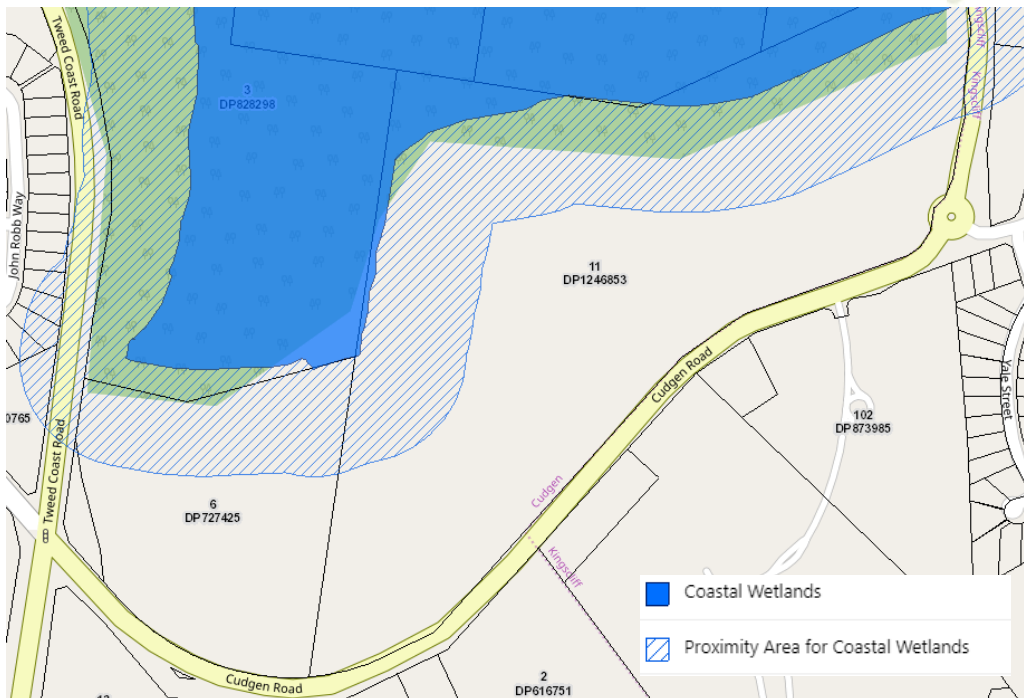


Figure 6.1 Coastal Wetlands and Proximity Map (CM SEPP)

6.1.2 SEAR 2 - Policies and Strategic Context

The policy and strategic planning context related to the Project has been addressed in Section 5.2 of the EIS.

6.1.3 SEAR 3 - Built Form and Urban Design

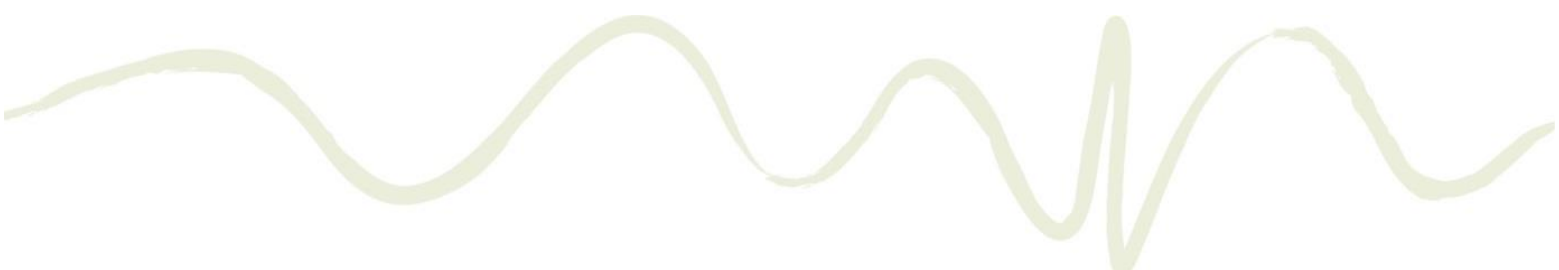
Built form and urban design is associated with hospital and not directly applicable to the external road works/ upgrades. The proposed upgrade of Tweed Coast Road/ Cudgen Road intersection and associated approaches would not have any adverse built form or urban design implications.

6.1.4 SEAR 4 – Environmental Amenity

The upgrade to Tweed Coast Road/ Cudgen Road is not a significant scope of work and would occur with the existing and highly modified road reserve. A number of pavement extensions/ widening and intersection modifications are proposed, however no significant landform or road infrastructure transformation is required, meaning minimal amenity or visual related impacts.

The road upgrade, including pavement extension and widening, and minor associated vegetation clearing would not result in a significant variation to the visual environment. The work is considered to be consistent with the current visual setting of roads and associated infrastructure currently present within the road reserve. There would be no unreasonable long-term amenity impact to surrounding residential or rural land uses. The upgrade is considered to represent a negligible long-term variation in the visual setting of existing road reserve.

The construction phase will involve the presence of works crew, plant and equipment, and potential temporary lay down areas. This represents a temporary and short-term variation in the visual environment and amenity related factors. However, the construction phase of this component would



be assessed in more detail in Stage 2. Following completion of the upgrade such temporary features would be removed and have no lasting impact on amenity.

6.1.5 SEAR 5 - Staging

As outlined in the EIS the Tweed Valley Hospital is proposed to be constructed over two stages.

The recommended/ proposed upgrade of Tweed Coast Road/ Cudgen Road intersection and associated approaches would be assessed in further detail and constructed as part of Stage 2.

6.1.6 SEAR 6 – Agricultural Impact

The upgrade of Tweed Coast Road/ Cudgen Road would occur within the existing road reserve. No agricultural impact associated with this component would occur.

6.1.7 SEAR 7 – Transport and Accessibility

A TIA (Appendix L of the EIS) assessed transport and accessibility requirements to support the development of the Tweed Valley Hospital, in accordance with the SEARs. Transport and traffic were assessed for operational and construction phases.

As outline in the TIA and EIS, the external road network and applicable intersections are expected to cater for the predicted future background and design traffic scenarios, with the exception of the Tweed Coast Road/ Cudgen Road intersection. A range of capacity and performance upgrades (as an interim to the four-lane upgrade of Tweed Coast Road by Council) have been identified and are proposed as part of the Project. This includes:

- upgrades required to cater for Background Traffic volumes in 2023;
- upgrades required to cater for Design Traffic volumes (Development plus background) in 2023.

The upgrade (described in Section 5.2) forms part of the Concept Proposal and is now proposed to be undertaken at Stage 2, supported by additional detail as required.

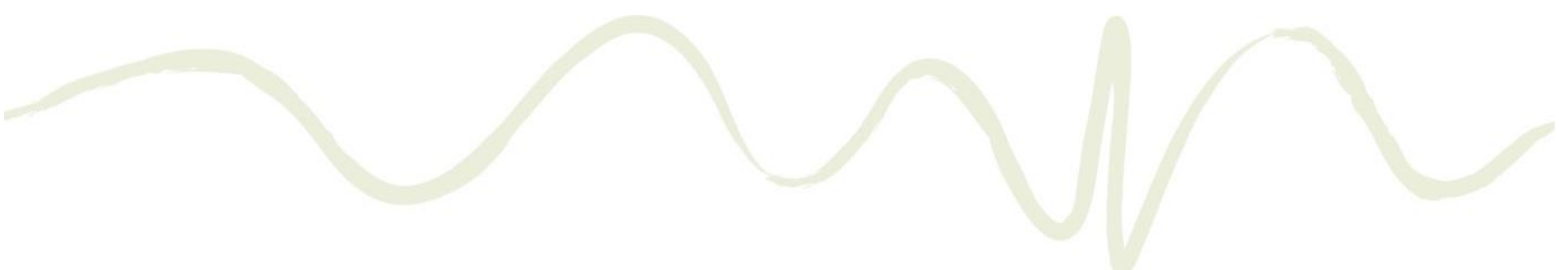
On the basis of the traffic engineering advice, assessment undertaken and recommended upgrades, the proposed intersection improvements would operate within acceptable performance limits and would be acceptable from a traffic engineering perspective.

Section 6.3 (Transport and Accessibility) of the EIS provides a summary of the findings of the modelling undertaken, outlines the recommended upgrades/ improvements and includes relevant justification for these.

Responses to submissions/ comments received from agencies and Tweed Shire Council during exhibition of the EIS have been addressed in Table 4.2 and the traffic and transport response attached at **Appendix N**. Whilst the detailed design and construction-related assessment would be addressed at Stage 2, the proposed upgrade and design solution is supported by RMS and Council officers.

6.1.8 SEAR 8 – Ecologically Sustainable Development

An Environmentally Sustainable Design (ESD) report was provided with the EIS (EIS Appendix M). The report provides a summary of the relevant industry best practice guidelines and outlines how the



design team will respond to requirements through the implementation of specific ESD measures and initiatives for the Project.

Applicable measures would be applied to the upgrade works, including:

- Reducing energy consumption and associated CO2 emissions;
- Reducing potable water consumption;
- Reducing the impacts of materials specification (e.g. use of sustainable and low carbon materials; use of locally sourced materials; improving material efficiency);
- Reducing the generation of waste associated with the development;
- Reducing pollution associated with the development (e.g. surface water run-off).

6.1.8.1 Principles of Ecologically Sustainable Development

The EIS addressed the principles of ecologically sustainable development contained in Schedule 2 of the EP&A Regulation 2000. The inclusion of the Tweed Coast Road/ Cudgen Road intersection upgrade would not alter the conclusions of the EIS in this regard.

The precautionary principle has been applied and potential environmental impacts have been assessed in the context of the Project and would be limited. The upgrade occurs within the highly disturbed road reserve and is not significant in scope. All works would be undertaken in accordance with the applicable measures and safeguards, and a detailed CEMP prepared for Stage 2.

Intergenerational equity would be maintained, and local environmental values would not be substantially adversely affected.

No significant impacts are expected to affect ecological integrity and biological diversity would be maintained.

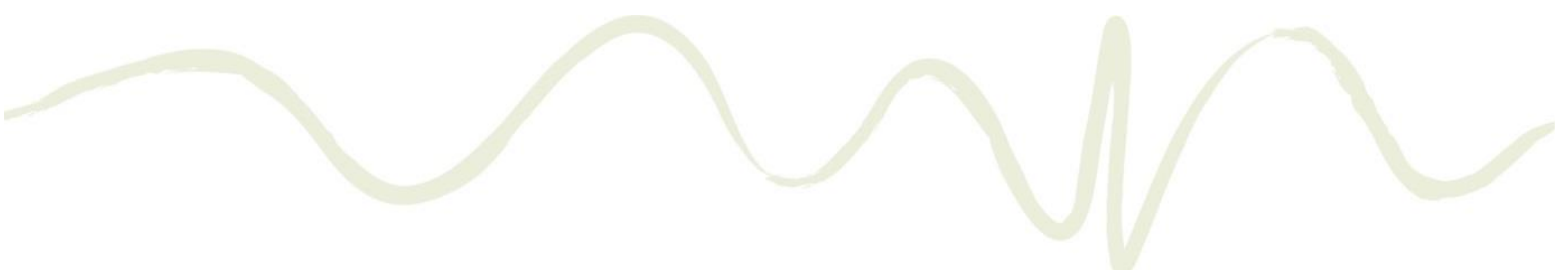
Relevant mitigation measures and safeguards would be developed and implemented to ensure sound environmental practices and outcomes are achieved. The capital investment of the Project includes expenditure for construction management and measures to avoid, minimise and mitigate potential environmental impact.

6.1.9 SEAR 9 – Social and Economic

A Social and Economic Impact Assessment (SEIA) was prepared for the Project and provided with the EIS. Additional assessment has also been prepared and provided with this Submission Report as outlined in previous sections.

The recommended intersection upgrade would benefit the local community and support the operation of the hospital (based on traffic considerations in 2023 and as assessed in the EIS) by providing an improved level of service at this intersection.

Some temporary construction related impacts such as noise, dust and construction related traffic disruptions could occur during the construction phase (to be undertaken at Stage 2) and affect nearby residents. The Stage 2 SSDA and EIS will assess construction related impacts, with the intension of avoiding, minimising or mitigating potential impacts. Following completion of the intersection upgrade, construction related impacts would be removed and no long-term effects are anticipated.



The recommended upgrade is to be undertaken in the interim and to be commensurate with planning for the ultimate design scenario associated with the four-lane upgrade to Tweed Coast Road in the future (by Council).

6.1.10 SEAR 10 – Aboriginal Heritage

The surrounding area includes modest ridge forms and low-lying coastal wetland lands. However, the Tweed Coast Road/ Cudgen Road intersection upgrade is located on highly disturbed and cleared land, within the existing road reserve.

An Aboriginal Cultural Heritage Assessment was prepared for the Project by Niche (Appendix N of the EIS). The assessment included research, consultation with Aboriginal parties and a site survey. It did not identify any sources of Aboriginal heritage at or in the immediate vicinity of the Project Site. An Aboriginal Heritage Information Management System (AHIMS) search was conducted and provided as part of the Aboriginal Cultural Heritage Assessment and captured a broad area around the Project Site, including the general upgrade area of Tweed Coast Road/ Cudgen Road intersection. No registered Aboriginal places or objects are identified within the area of proposed works.

The external road works are located in highly disturbed areas and are within the road reserve. There are no features that suggest undiscovered heritage items occur in the vicinity.

The extent of previous disturbance and lack of any evidence of Aboriginal Heritage, indicates the upgrade presents minimal risk to Aboriginal heritage; in line with *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (OEH 2010)*. The recommendations of the Aboriginal Cultural Heritage Assessment prepared for the EIS would be applicable to the Project as a whole. Stage 2 works would be specifically addressed in the next SSDA and EIS prepared for this stage.

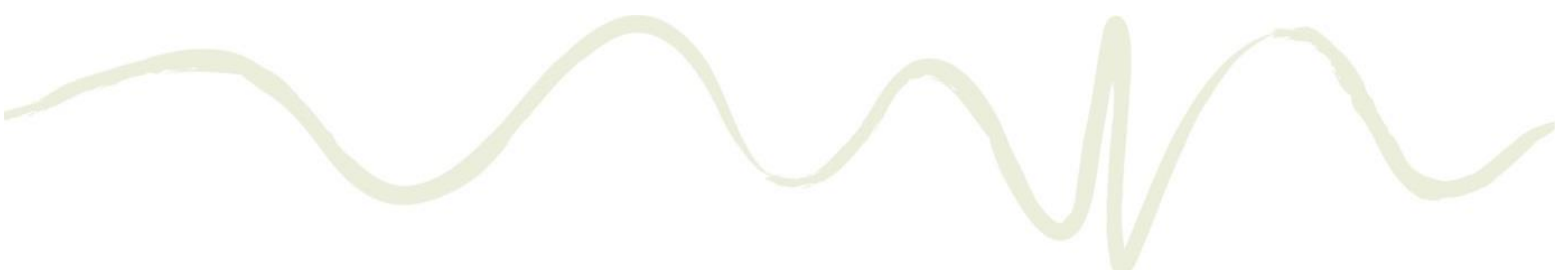
6.1.11 SEAR 11 – Noise and Vibration

Section 5.11 of the EIS and the submitted Noise and Vibration Assessment (Appendix P of the EIS) was prepared for the Project and assessed the Concept Proposal (including a preliminary operational assessment) and Stage 1 Works. An Addendum Noise and Vibration Assessment (**Appendix L**) to the original assessment has been prepared to assess construction noise associated with the proposed road works external to the Project Site. The assessment has also included consideration of Tweed Coast Road/ Cudgen Road intersection upgrade works for information purposes, however these will be further addressed and carried out in Stage 2.

The assessment submitted with the EIS found that general traffic increase along Cudgen Road, Turnock Street and Tweed Coast Road, as a result of the hospital operation, is unlikely to have adverse noise impacts on receivers surrounding the Project Site.

The Tweed Coast Road/ Cudgen Road upgrade has been included in the Addendum assessment (that relates to construction noise and vibration) for information only as these works are not part of the Stage 1 scope of works and will be included in Stage 2. Based on the assessment, these works are expected to have the highest noise level impact at residential receivers in Catchment C due to the close proximity of works, exceeding the Highly Noise Affected levels for all activities. However, this would be temporary.

Implementation of feasible and reasonable mitigation measures would be required, including development of a CNVMP. Further detailed assessment would inform and be addressed in Stage 2.



6.1.12 SEAR 12 – Contamination

The intersection upgrade would occur within the existing road reserve and this area is not expected to be affected by any significant contamination.

Standard management measures would be required, including an Unexpected Finds Procedure (UFP) for potential contaminated materials shall adopted at the time of construction for all ground disturbance activities.

6.1.13 SEAR 13 – Utilities

The proposed intersection upgrade is expected to require service adjustments/ relocations.

The detail of service locations and any adjustments would be determined in conjunction with the relevant service providers and inform Stage 2. Any potential disruption to services or utilities would involve suitable notification to affected parties. The upgrade would not result in any significant demand increase on or impact to utilities or services.

6.1.14 SEAR 14 – Water and Soils

Part of the northern extent of the Tweed Coast Road/ Cudgen Road intersection (and approach) upgrade works would extend into a mapped 'proximity area' for Coastal Wetlands. However, the footprint of the upgrade would occur entirely within the existing road reserve, requires only minor disturbance and is reasonably removed from and not expected to impact the wetland area.

The proposed upgrade footprint does not encroach upon defined water courses or waterfront land. There would be no direct impact to mapped Coastal Wetlands. Appropriate construction management measures and safeguards, including soil and water management developed at Stage 2, would avoid and reduce the risk of indirect impacts. Controls would be in line with relevant authorities and best practice standards, including Managing Urban Stormwater, Soils and Construction Guidelines ("the Blue Book").

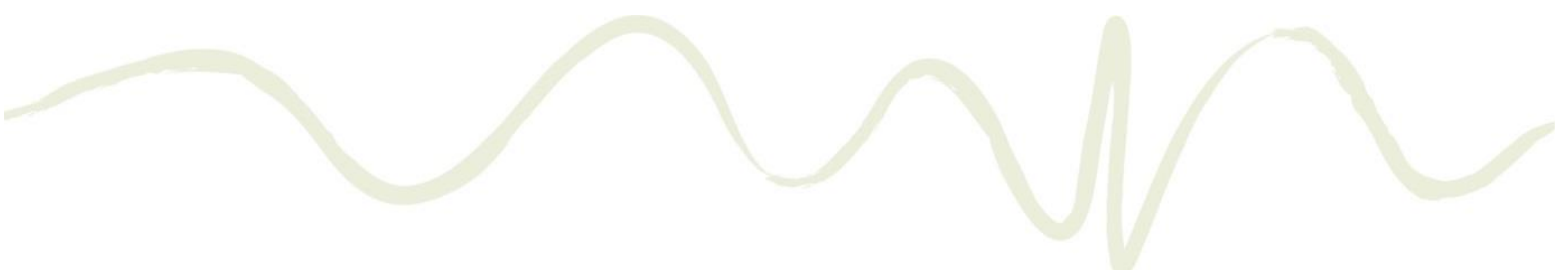
No excavation is expected to intercept groundwater and no dewatering would be required.

No significant impact on water quality, water bodies and hydrological processes are expected.

Overall, the upgrade of Tweed Coast Road/ Cudgen Road intersection presents minimal risk to hydrology and water quality, and the work to be detailed further at Stage 2 would be subject to safeguards and mitigation measures to adequately protect the surrounding environment.

The upgrade footprint is mapped as Class 5 ASS. No works are expected below five metres AHD and therefore do not trigger clause 7.1 of the TLEP 2014. On this basis and providing no soil disturbance is carried out below five metres AHD and works do not lower the water table below one metre AHD (which is not expected to occur), and do not encroach land mapped as a high probability of occurrence, an ASS investigation or management plan would not be required.

Overall, an ASS investigation is not required, and ASS are not expected to be encountered. Additional assessment would form part of Stage 2 relevant to undertaking the works, however it is expected that standard construction management measures for any unexpected or potential encounters with ASS would be adequate. If works were required below five metres AHD or occur on land mapped as a high probability of occurrence an ASS management plan would need to be prepared by the contractor.



6.1.15 SEAR 15 – Contributions

Contributions for the Project are addressed in Section 5.1.5 of the EIS.

All transport “enabling works” will be funded by Health Infrastructure as part of the Project.

Health Infrastructure will work with Tweed Shire Council and RMS on the planning and delivery of the Tweed Coast Road/ Cudgen Road intersection capacity upgrades and how these works will effectively interface with Tweed Shire Council’s planned four-lane upgrade of Tweed Coast Road.

6.1.16 SEAR 16 - Drainage

The upgrade to Tweed Coast Road/ Cudgen Road intersection would be integrated into the existing road infrastructure and associated drainage. No significant impact relating to drainage is expected and additional detail and assessment would occur at Stage 2.

6.1.17 SEAR 17 – Flooding and Coastal Hazards

The upgrades to Tweed Coast Road/Cudgen Road intersection and applicable approaches are all located above the one percent Annual Exceedance Probability (AEP) flood level, however the northern extent of pavement extension/ widening would encroach into the Probable Maximum Flood (PMF) extent. Nonetheless, the upgrade is not of a significant scope, involving a relatively minor amount of pavement extension/ widening, and all work would occur within the existing road reserve. Furthermore, the works occur are at the upper fringe of the PMF extent and are not expected to significantly alter ground levels, with no major landform modification required. The relatively minor pavement extension/ widening to the existing carriageway is not expected to adversely alter flood storage or patterns locally.

As outlined in the Flood and Coastal Hazards Assessment (Appendix W of the EIS), alternative routes to the Project Site are available in times of flood.

6.1.18 SEAR 18 – Bush Fire

This is not applicable to consideration of the proposed upgrade to the Tweed Coast Road/Cudgen Road intersection.

A bush fire assessment was provided in the EIS in relation to the Tweed Valley Hospital/

6.1.19 SEAR 19 – Biodiversity

The BDAR (attached at **Appendix E**) has been revised to include assessment of the Tweed Coast Road/ Cudgen Road intersection and approach upgrade. Required vegetation clearing and disturbance is limited and affects the road side verge. It is proposed that one tree, associated woody vegetation, undergrowth and grass will be removed to support the road widening works at Tweed Coast Road. The vegetation is identified as ‘Early regrowth rainforest, highly disturbed, early regeneration’. This vegetation is not identified as a TEC.

No significant impacts to biodiversity, including threatened species or EPBC Act/ Matters of National Environmental Significance, are likely. Appropriate safeguards and mitigation measures, as outlined in the BDAR, would be implemented at the time of works.



6.1.20 SEAR 20 - Waste

As outlined in the EIS, the Project and all works would be undertaken to ensure minimal impacts are generated from waste material produced by ensuring that waste is minimised, managed, collected and disposed of or recycled in accordance with NSW legislative waste disposal protocols and EPA guidelines. No materials will be used or disposed of in a manner that poses a risk to the environment or public safety.

Whilst not proposed to occur until Stage 2, the intersection upgrade could contribute to the Project's construction related waste generation. This would be further defined in Stage 2 when construction related matters for that stage are considered in more detail. Nonetheless, waste generated during construction could include:

- Excess sediment spoils;
- Vegetation waste;
- Demolition waste (e.g. removal of road pavement sections or services related material due to relocations);
- Construction and building waste; and
- Packaging and general waste.

As outlined in the EIS, all works will be undertaken in accordance with legislative requirements relevant to the management of waste in NSW. Waste management practices will adopt the principles of reduce, reuse, recycle, treat and dispose.

The preliminary WMP submitted with the EIS, and additional waste information at **Appendix O**, provides an overview of waste management practices for the Project based on the current stage.

The works will be undertaken by a principal contractor who will prepare their own detailed WMP once appointed for the applicable stage of work. It would provide further details of the management requirements for expected waste types as required.

Mitigation measures and safeguards applicable to waste would be adopted and offer effective management of waste.

6.1.21 SEAR 21 – Community Engagement Strategy

The community engagement strategy was outlined in Section 4.4 of the EIS and supported by the Consultation Report at Appendix H of the EIS. This strategy encompassed the Project as a whole. Additional consultation has been outlined in Section 2 of this Submissions Report.

As detailed in the EIS and TIA, consultation has been undertaken and ongoing with RMS and Tweed Shire Council with respect to applicable road works and upgrades.

6.1.22 SEAR 22 – Impact on Airspace

This is not applicable to consideration of the proposed upgrade to the Tweed Coast Road/Cudgen Road intersection.

Assessment of airspace and aviation was provided in the EIS in relation to the Tweed Valley Hospital.

6.1.23 SEAR 23 – Underground Petroleum Storage

This relates to the hospital's operation and is not applicable to consideration of the proposed upgrade to the Tweed Coast Road/Cudgen Road intersection.

6.1.24 Historical (Non-Aboriginal) Heritage

Niche prepared a Historical Heritage Assessment for the Tweed Valley Hospital Project (EIS Appendix O) that assessed the Project Site and immediate surrounds. Niche has subsequently prepared a Statement of Heritage Impact (SoHI) (attached in **Appendix H**) to assess the proposed upgrade at the Tweed Coast Road/ Cudgen Road intersection in relation to an adjacent locally listed heritage item. The item is identified as the 'Cudgen Sugar Mill Remains', an archaeological site listed as an item of local significance within Schedule 5 of the TLEP 2014 (item A2).

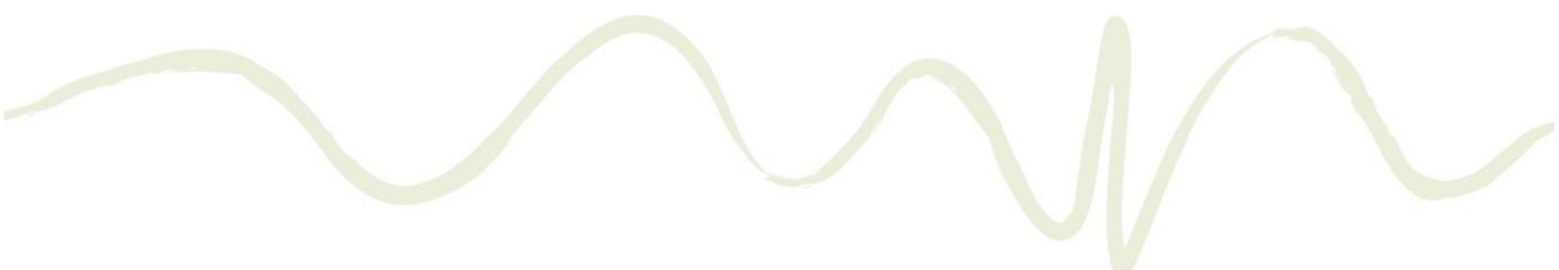
Searches of the Australian Heritage Database, the State Heritage Register, State Heritage Inventory and the TLEP 2014 heritage listings have been undertaken. There are no listed items within any of the registers at the Project Site or within the immediate surrounds. There are no listed items of State heritage significance located within proximity to the upgrade area. As referred to above, the only proximal listed heritage item is the 'Cudgen Sugar Mill Remains', item A2 on Schedule 5 of the TLEP 2014 (refer to Figure 6.2 below) that occurs adjacent to the intersection of Tweed Coast Road and Cudgen Road.



Figure 6.2 TLEP 2014 Heritage Map

The SoHI presents the results of background heritage register searches, historical research, a site inspection, and significance and impact assessments. It has been prepared in accordance with the *Statements of Heritage Impact* guidelines published by the NSW Heritage Office and Department of Urban Affairs and Planning (1996, revised 2002), originally published as part of the NSW *Heritage Manual*.

The intersection improvement works are expected to involve a new left turn lane for the approach along Tweed Coast Road. As a result, the road would be widened to accommodate the new left turn



lane. The widening of the road will occur within the existing road reserve. The intersection upgrade includes lane discipline, light/signal and sign changes, as well as service adjustments.

The works will take place directly adjacent to the 'Cudgen Sugar Mill Remains', a site with recognised archaeological values and listed in the TLEP 2014 (Schedule 5, Part 3, ID A2) for its historical and aesthetic significance. The Cudgen Sugar Mill Remains are important to the local area and history of Cudgen as the only fully developed 'plantation' mill using Islander labour.

The subject area is part of Lot 2 DP828298, which forms the LEP listing for the Cudgen Sugar Mill Remains. However, based on the results of the SoHI, the subject area has been heavily modified in the recent past as evidenced by the presence of a large drainage culvert that runs from the north-east corner to the south-west, fill now covering over much of the subject area, and evidence that the land surface has been substantially lowered in the past to create a level surface.

The full extent of archaeological remains associated with the Cudgen Sugar Mill is not clear from available documentation. The TLEP 2014 listing indicates that the main surviving evidence of the mill – remnants of the former chimney stack that was demolished c.1962 – are located to the north of the subject area and outside the impact area of the intersection upgrade.

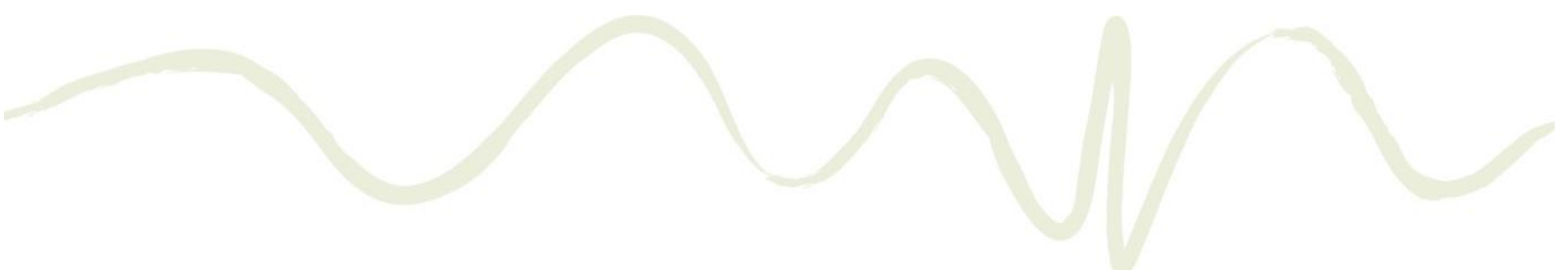
There would be no direct physical impact on the archaeological values of the Cudgen Sugar Mill Remains and the assessment concludes that the upgrades will not impact on the significance of the adjacent heritage item. No additional assessment is required unless later design changes would result in works within the curtilage of the heritage item.

The recommendations of the SoHI prepared for the Tweed Coast Road/ Cudgen Road intersection would be applied in Stage 2, applicable to undertaking the works. These would be further defined in Stage 2 and are expected to include:

- All construction personnel working on-site will receive training in their responsibilities under the *Heritage Act 1977*.
- Should non-Aboriginal heritage items be uncovered during works, all works in the vicinity of the find will cease and the State Heritage Office and the Council will be contacted.
- In the unlikely event that archaeological remains (relics) are discovered, work must cease in the affected area and the Heritage Council must be notified in writing in accordance with section 146 of the *Heritage Act 1977*. Depending on the nature of the discovery, additional assessment and possibly an excavation permit may be required prior to the recommencement of excavation in the affected area.
- If the Tweed Coast Road/ Cudgen Road intersection design changes to include works within the curtilage of the heritage item, a revised Statement of Heritage Impact (SoHI) will need to be prepared to address possible impacts.

6.2 Assessment of Additional Stage 1 Works – Site Accesses and Associated Road Works

The following provides an environmental assessment of the additional access and external road improvements/ works that are to be included in Stage 1. These works were originally planned to be undertaken as part of the Preliminary Works. However, following further advice, consideration of the submissions and consultation, these road works were not included in the REF. DPE's letter dated 18 December 2018 (Attachment 2 point 7) requested "*details of any additional works proposed as part of the Stage 1 works in lieu of preliminary works (not identified in the EIS)*". The scope of these works is not considered to be significant and have been assessed in the originally submitted EIS's supporting



specialist assessments. This included assessment as part of the Concept Proposal as they formed part of the Master Plan however, for reasons discussed above, they are now to be undertaken as part of Stage 1 Early and Enabling Works, rather than separate Preliminary Works. These additional works include (and have been further described in Section 5.3):

- Addition of new site access point from Cudgen Road at the south-western boundary of the Project Site (referred to as access 'A' on plan AR-SKE-10-007 Rev2); and
- Addition of new site access point from Turnock Street roundabout to the Project Site (referred to as access 'D' on plan AR-SKE-10-007 Rev2), including intersection improvement works, electrical connections for street lighting and a new water main connection beneath the road/ intersection.

The works largely affect existing road reserves and points of interconnect with the Project Site, hence highly disturbed land. No significant environmental impacts are anticipated in relation to carrying out these works. The following sections provide an environmental assessment of the additional works in accordance with the SEARs requirements issued by DPE for Stage 1 Works.

6.2.1 SEAR 1 – Bulk Earthworks

As outlined in Section 5.3.4, the additional works are not expected to involve any major bulk earthworks and do not involve any significant landform modification. Only relatively minor earthworks are expected.

The TIA prepared by Bitzios (Appendix L of the EIS) provided consideration of construction related impacts for Stage 1 works, which would also suitably encompass the addition of these relatively minor access/ road works. Whilst haulage routes have not been confirmed at this stage, the main access/ haulage routes are expected to be via Cudgen Road, Tweed Coast Road and the Pacific Highway, consistent with that described in the EIS. Given the additional works are not expected to involve significant earthworks, no significant removal of excess of spoil is expected to be associated with these works and associated impacts are expected to be minimal.

Consistent with the EIS and TIA, any haulage of material would be managed through the scheduling of deliveries and availability of fleet to minimise the number of haulage and delivery vehicles during peak periods. This would be managed as part of the CEMP to be prepared for Stage 1 Works.

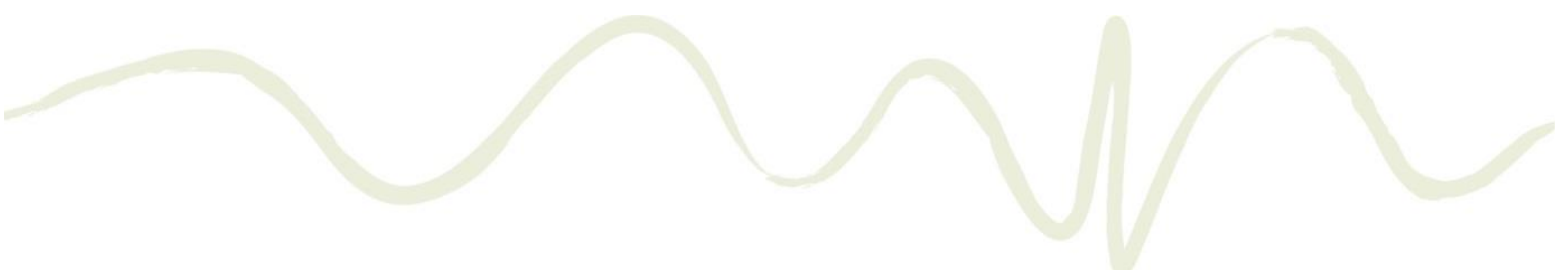
Construction traffic matters are also further discussed in Section 6.2.3.

6.2.2 SEAR 2 – Site Office Details

No additional site office is required as a result of the changes.

6.2.3 SEAR 3 – Transport and Accessibility

The proposed access points and road works were identified in the EIS and designed according to traffic engineering advice and modelling for the Tweed Valley Hospital Project. These works are to be undertaken to ensure the Project Site has appropriate access, supporting safe construction ingress and egress for Stage 1 Works and the future hospital road network in Stage 2. The TIA (Appendix L of the EIS) prepared for the Tweed Valley Hospital Project undertook a comprehensive traffic assessment and extensive modelling to inform the hospital concept.



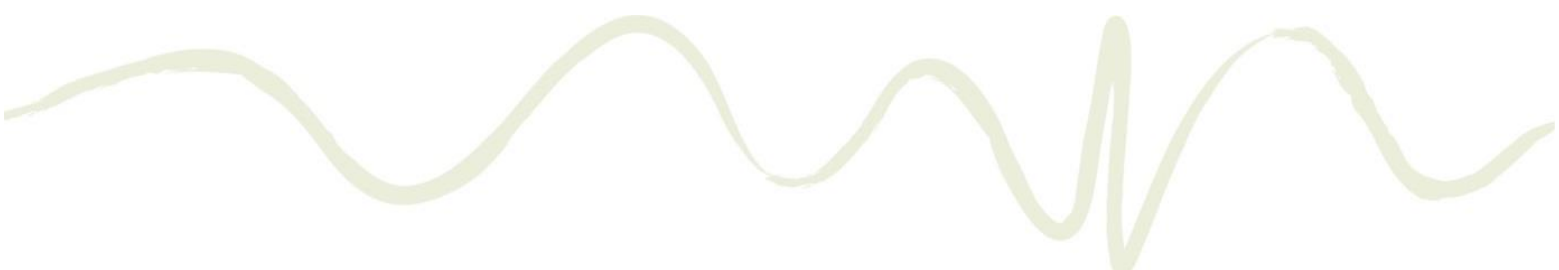
Section 6.3 (Transport and Accessibility) of the EIS provides a summary of the findings of the modelling undertaken, outlines the recommended works/ improvements and includes justification for the works and design proposed.

Responses to submissions/comments received from agencies and Tweed Shire Council during exhibition of the EIS have been addressed in Table 4.2 and the traffic and transport response attached at **Appendix N**. The following provides the reasoning and justification for the access 'A' and 'D' design solutions in response to Council's submission and as discussed in traffic and transport response (**Appendix N**).

The proposed configuration of Access A incorporates a higher order facility compared to a standard driveway crossover as typically stipulated under Council's Driveway Access to Property Specifications. The reasonings for this are as follows:

- The proposed access location is ultimately planned to connect to a service ring road and provide dedicated access to emergency services and authorised vehicles to the precinct. Access will be limited to left-in movements only and shall be appropriately signed. No right turns will be permitted at Site Access A;
- Council's driveway specification does not specify turn treatments. The installation of turn treatments for property access is also not explicitly stipulated within Austroads, but may be used as a guide only. The design service vehicle using this access coupled with the through traffic volumes were reviewed through the design process. Given these volumes combined with the signalised intersection located to the west, the installation of a turn treatment was considered necessary to allow design vehicles entering the site to do so without the risk of rear end collisions associated with through traffic. Bitzios (project traffic engineers) are of the view that a turn treatment is appropriate at this access location to improve safety when compared to a standard driveway crossover;
- Council's standard driveway crossover incorporates a perpendicular driveway to the road. This configuration requires a 90-degree angled turn into the site and traverse the kerb and channel crossover. Whilst this operation is acceptable for typical crossovers that allows two-way movements turning right and left into a site, the proposed access is for left-in movements only and by Ambulances and service vehicles. As such, the driveway alignment and splays are only required for left-in movements and by the nominated largest vehicle, which in this case is an Articulated Vehicle. In order for an Articulated Vehicle to enter the site from the kerbside turn lane, the driveway splay across the shared pathway will be significantly wider than the proposed configuration. This configuration will increase the pedestrian/ cycle 'crossing distance' from 3.5 m up to an estimated 13 m under Council's originally requested configuration. In addition, under a perpendicular driveway configuration eastbound pedestrians/ cyclist are required to check for entering vehicles a full 180 degrees (i.e. back in the opposite direction of travel) for inbound vehicles seeking to enter the driveway. Under the proposed configuration, pedestrian/ cyclists would be required to rotate 90 degrees to check for approaching vehicles; and
- The installation of vertical thresholds or sharper turns to enter the site via a driveway crossover was expressed through the stakeholder consultation process as an issue for Ambulance operations. Specifically, a standard driveway configuration impacts the delivery of emergency patients to the hospital who may in distress, fragile or undergoing emergency procedures while in transit. The proposed access configuration allowed for a level and direct access to the site, whilst still maintaining adequate pedestrian crossing facilities past the access.

As noted above, the proposed access configuration includes a 3.5 m access roadway width, with a pedestrian ramp crossing positioned at 90 degrees to the roadway. This proposed configuration provides a significantly shorter crossing distance for pedestrians with improved pedestrian sight lines when compared to an industrial vehicle crossover as originally requested in Council's submission. The



proposed access configuration is consistent with other existing private access configurations located in both the Tweed Shire and Gold Coast jurisdictions.

The western site access (Access A) was designed specifically for use by authorised vehicles and primarily emergency/ Ambulance vehicles accessing the site via Tweed Coast Road (west). The access is an ingress only and left in only (no right turn). Based on the specific vehicle requirement and consultation with emergency services, a higher order treatment was proposed in accordance with Austroads design and turn warrants. Pursuant to the above, the authorised vehicle access has been designed as a kerb return with the inclusion of a deceleration lane.

The pathway crossing of the left-in access lane is designed as per Austroads requirements, providing perpendicular ramps with clear sight lines to the west to view approaching traffic.

It is noted that Council initially raised concern in their submission with Access A due to potential safety issues (refer Table 4.2), however these have been addressed with the following amendments noted on design plans:

- RMS approved fencing is to be installed adjacent to the ancillary lane for Access A to ensure that pedestrians cross at the pram ramp;
- Appropriate cyclist/ pedestrian chicanes to be installed as per RMS/ Austroads requirements, on the shared user path approaches to Access A; and
- Signage to be installed on the shared user path advising pedestrians/ cyclists that a road is ahead on the approaches to Access A.

With regards to Access D, it is noted that Council's submission initially raised concern with Access D as it did not show a continuous footpath connection. The design of Access D has been amended to include a continuous footpath connection. The reduced approach and circulation lanes are proposed to provide compliant lane configurations and to improve lane balance and utilisation through the intersection. The proposed design can cater for Service Vehicle Turn Paths traversing the Cudgen Road/ Turnock Street roundabout.

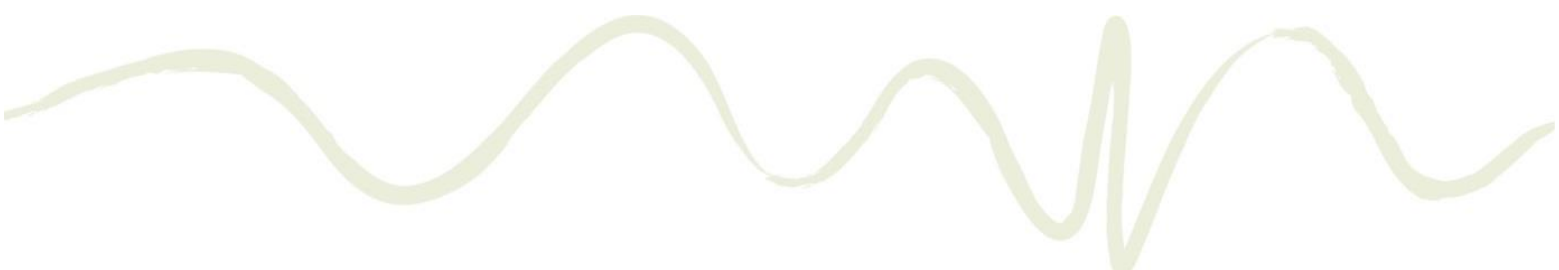
Council Technical Officers have noted acceptance of the access designs with the above-mentioned amendments as documented in "Agenda – Ordinary Council Meeting Wednesday, 12 December 2018". Excerpts from the agenda are presented in the traffic and transport response (**Appendix N**).

6.2.3.1 Construction Impacts

The additional works involve two new site access points and associated road works. The main potential impacts associated with these works are related to the temporary construction phase, with operational outcomes being a better performing roundabout and provision of safe and suitable site access. Construction traffic would be generated by:

- construction employees arriving and leaving the sites;
- truck deliveries for construction purposes;
- equipment and plant being delivered for construction purposes; and
- periodic deliveries of construction materials, as well as removal of spoil or waste (as required).

As discussed in Section 6.3 of the EIS, the Stage 1 Works would result in additional traffic that may result in some delays on the public road network as a result of construction vehicles travelling on the network and accessing the work site and additional traffic movements associated with construction personnel. Further, the external road works affect the public road network and an existing intersection.



This would result in some disruption to traffic and require traffic management and control to maintain traffic movements and ensure safety during the works.

As outlined in the EIS, construction traffic movements for deliveries are typically expected to be spread throughout the day. The construction related additional traffic movements may result in some additional delays at key intersections and key travel routes, however given the nature and temporary duration of the works this is not expected to be significant. Where practical, any heavy vehicle movements should take place outside the commuter and school peak periods. It is likely that much of the labour force will arrive prior to the typical AM peak period, reducing potential impacts in these periods.

Where required, vehicle movements, including property access, would be managed under a Traffic Management Plan and notice given to any affected parties/residences.

The works would also affect sections of shared paths. Path diversions may be required during the course of the construction period to accommodate the construction staging of the works and ensure pedestrian and bicycle safety.

The additional Stage 1 works are not expected to significantly increase construction traffic associated with Stage 1 of the Project as they are a relatively minor addition to the scope of work to be carried out in this stage. The assessment and findings of the TIA submitted with the EIS remain applicable.

All construction traffic and any impacts to the external road network due to works or in providing construction access will be managed under a Construction Traffic Management Plan (CTMP) and traffic control plan (TCP). These will be prepared in accordance with the Roads and Maritime Services (formerly RTA) Traffic Control at Work Sites manual. The construction contractor will be required to develop and seek approval for the implementation of a CTMP prior to commencement of construction to ensure safe and efficient management of traffic. A preliminary CTMP accompanied the TIA (Appendix L of the EIS). The preliminary CTMP is for information only and is not for implementation, however the guiding principles would remain applicable. A detailed and formalised CTMP would be prepared by the contractor prior to the start of construction and would address all works, including external road works.

The works would establish formal, safe and efficient access to the Project Site. Post construction of the external road works, traffic movement and flow would be reinstated as far as practical and help to reduce construction traffic impacts by facilitating better access to the site via dedicated access points.

The overall Stage 1 construction related traffic is not expected to result in any significant impacts and would be of a temporary nature and managed accordingly.

The overall conclusion from the investigations carried out by Bitzios Consulting, presented in the TIA as part of the EIS and the traffic and transport response outlined in this Submissions Report at **Appendix N** indicate that the Project and Stage 1 works would be satisfactory from a traffic perspective.

The mitigation measures and safeguards outlined in the EIS would adequately address and incorporate management of the additional works and potential traffic impacts. This includes implementation of the recommendations prepared by Bitzios, including development of a detailed CTMP by the contractor and incorporation into the Project's CEMP.

6.2.4 SEAR 4 – Noise and Vibration

The proposed additional Stage 1 Works (accesses 'A' and 'D') locations in relation to surrounding receivers are shown in Figure 6.3.

Acoustic Studio have undertaken an assessment of construction noise and vibration impacts applicable to the additional works to be undertaken as part of Stage 1 (**Appendix L**). Note, the future upgrade of the Tweed Coast Road/Cudgen Road intersection has been included in the assessment for information purposes only (to be further addressed and undertaken at Stage 2), and this section specifically relates to the site access and road works to be included in the Stage 1 Works. The results of the modelling, including established criteria and predicted noise levels at surrounding receivers are presented in the Addendum Noise and Vibration Impact Assessment at **Appendix L**. The following is a summary of the findings and recommendations by Acoustic Studio.

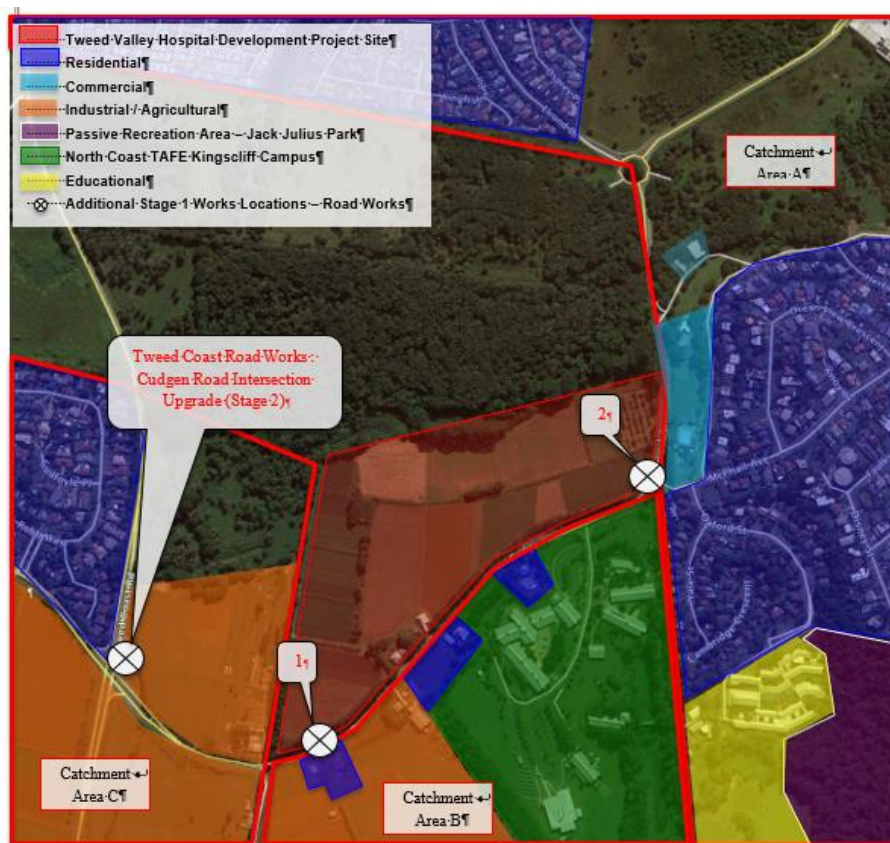
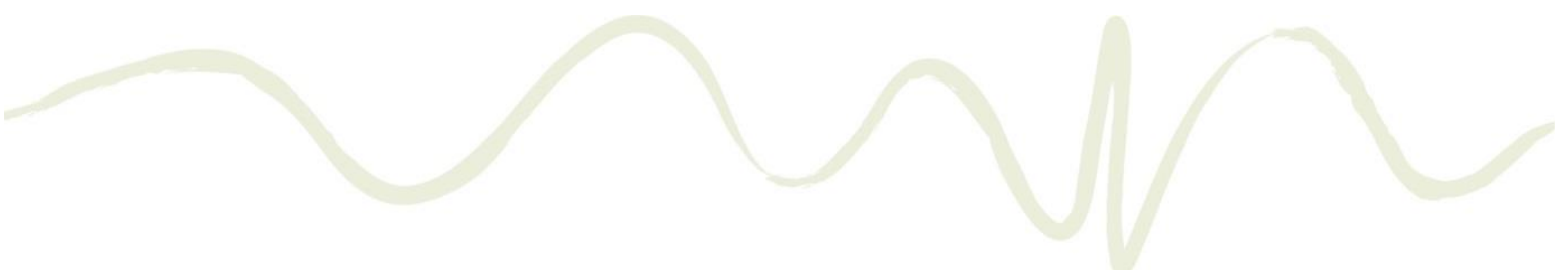


Figure 6.3 Indicative Additional Stage 1 Works Locations (identified as 1 & 2) in relation to noise-sensitive receives

6.2.4.1 Construction Noise

Construction works noise impacts from each works location is as follows:

- Proposed construction hours for the Additional Stage 1 Works are as follows:
 - Monday to Friday - 7:00am to 6:00pm.
 - Saturday - 8:00am to 1:00pm.
 - Sunday and Public Holidays – No works.

- 
- Based on the results of the assessment of construction activities, we make the following comments:
 - Location 1 will have the greatest impact on Residential receivers at Catchment B, exceeding Highly Affected Noise levels for most activities. The next most impacted receiver being nearby Agricultural land uses.
 - Location 2 will impact multiple receivers, exceeding the relevant noise management levels at residential receivers in Catchment A, the nearest commercial and TAFE.
 - Excavator works with hammering plus rock crushing are predicted to have the highest noise impacts, affecting multiple receivers from all Additional Stage 1 Works locations.

Mitigation measures to be considered and incorporated where reasonable and feasible would include:

- Maintaining standard work hours;
- Limiting more intensive works, such as excavator hammering to the least sensitive times of the day (i.e. avoid early morning, early evening where practical);
- Including Respite Periods where activities are found to exceed the 75 dB(A) Highly Affected Noise Level at receivers, such as three hours on one hour off;
- Consideration of localised screening or barriers for high noise level / isolated works; and
- Apply best practice noise and vibration controls as per Section 7.5 to 7.8 of the Noise and Vibration Assessment for the Tweed Valley Hospital project SSDA (Acoustic Studio 2018 – EIS Appendix P).

For all other receivers, the noise generated from the construction works and noise from individual equipment operating is below the Highly Noise Affected Levels and generally able to meet the Noise Management Levels (NMLs) and achieve the relevant criteria when further away from the perimeter boundary.

The predictions for noise levels above NMLs is not unusual given the plant and equipment that must be used, such as excavators and road saws plus the proximity of sensitive receivers.

It is important to recognise that the actual noise levels generated during the construction works are likely to vary considerably depending on many factors including:

- Number of items of plant and equipment operating simultaneously;
- Location of equipment at works locations – relative to the noise-sensitive receivers;
- Natural shielding of noise provided by changing elevation along and around the location of works;
- Reflections provided by existing structures on and around the work locations; and
- Meteorological conditions.

When construction works are likely to exceed stated criteria at nearest sensitive receivers, particularly when works occur in the areas closer to the nominated receiver, all feasible and reasonable noise control measures are to be considered.

If, during construction works, an item of equipment exceeds either the noise criteria at any location or the equipment noise level limits, the following noise control measures, together with construction best practices presented in Section 5.5 to 7.8 of the SSDA Noise and Vibration Assessment shall be considered to minimise the noise impacts on the neighbourhood:

- Schedule noisy activities to occur outside of the most sensitive times of the day for each nominated receiver.

- Consider implementing equipment-specific temporary screening for noisy equipment, or other noise control measures recommended in Appendix E of AS2436. This is most likely to apply to noisier items such as jackhammers.
- For large work areas, solid screening or hoarding as part of the worksite perimeters would be beneficial.
- Unnecessary idling of vehicles and equipment is to be avoided.
- Adopt quieter methodologies. For example, where possible, use concrete sawing and removal of sections as opposed to jackhammering.
- Ensure that any miscellaneous equipment (extraction fans, hand tools, etc), not specifically identified in this assessment, incorporates silencing/ shielding equipment as required to meet the noise criteria.

Implementation of all reasonable and feasible mitigation measures for all works will ensure that any adverse noise impacts to surrounding residential, commercial and recreational receivers are minimised when Noise Management Levels cannot be met due to safety or space constraints.

It is recommended that a comprehensive CNVMP is prepared further to this assessment. The engaged Contractor would be required to prepare a comprehensive CNVMP based on their proposed plant, equipment and construction methodology, prior to the commencement of any works.

6.2.4.2 Construction Vibration

When considering the vibration impact associated with the additional works, the following is to be taken into account:

- The type of vibration generating equipment;
- Geotechnical characteristics of the works locations;
- The layout of the works locations, including the location of static sources of vibration;
- Techniques used in construction to minimise generated vibration levels; and
- Hours of work with regard to the nature of operations in the affected buildings and the duration of the works.

A detailed vibration assessment has not been carried out by Acoustic Studio at this stage, as actual vibration levels experienced will be dependent upon:

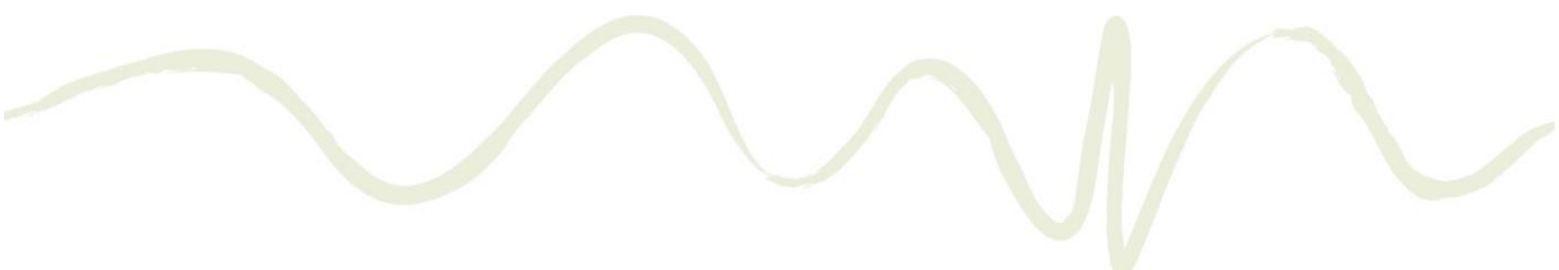
- Site and strata characteristics;
- Specific construction equipment used; and
- Vibration requirements of sensitive equipment.

Based on the scope of works and typical equipment required, some human perception vibration impacts may occur – particularly from the use of excavators with hammers and vibratory rollers at the nearest receivers to the works.

It is recommended that, prior to the commencement of the Additional Stage 1 Works, vibration surveys be carried out of each key vibration-generating-activity/ equipment.

The Contractor shall carry out a vibration assessment at the commencement of operations for each vibration generating activity to determine whether the existence of significant vibration levels justifies a more detailed investigation.

If the assessment indicates that vibration levels might exceed the relevant criteria, then vibration mitigation measures will need to be put in place to ensure vibration impacts are minimised using all reasonable and feasible measures.



A more detailed investigation would involve methods of constraining activities that generate high vibration levels. A method of monitoring vibration levels must then be put in place. Additionally, vibration monitors must also be put in place to manage sensitive areas. Vibration mitigation measures and vibration criteria will then need to be reviewed.

All practical means are to be used to minimise impacts on the affected buildings and occupants from activities generating significant levels of vibration on-site.

The following considerations shall be taken into account:

- Modifications to construction equipment used;
- Modifications to methods of construction;
- Rescheduling of activities to less sensitive times.

If the measures given above cannot be implemented or have no effect on vibration levels or impact generated, a review of the vibration criteria is to be undertaken and the vibration management strategy amended.

Catchment A and B residences present the most stringent vibration criteria, particularly given their proximity to the Project site. Controlling vibration at these receivers will also ensure that vibration criteria at all other receivers will also be satisfied.

It is recommended that a CNVMP is prepared further to this assessment at the detailed design stage when a Contractor is engaged. The Contractor would be required to prepare a final CNVMP based on their proposed plant, equipment and construction methodology.

6.2.4.3 Operation

The Noise and Vibration Assessment prepared for the EIS (EIS Appendix P) found that no significant road operational noise would result from the proposed access and road works.

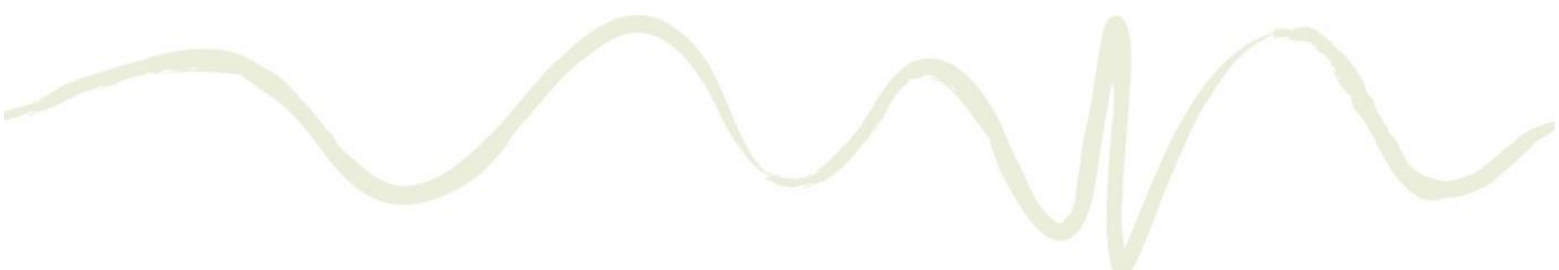
6.2.5 SEAR 5 – Sediment, Erosion and Dust Control

The topography at the access and road work locations is relatively flat to gently sloping. The topographic and biophysical context at the location of additional works are not considered to be associated with high erosion risk or landslip issues. The works do not occur in the immediate vicinity of water courses.

Erosion and sedimentation associated with the work activities may pose a risk to the receiving environment if appropriate measures are not implemented. Soil and erosion control procedures and devices, as detailed in the EIS, will be provided during construction. Controls are to be in line with relevant authorities and best practice standards, including Managing Urban Stormwater, Soils and Construction Guidelines (“the Blue Book”). A Soil and Water Management Plan would be prepared and implemented for all Stage 1 Works.

Air quality and dust was assessed in Section 6.5.2 of the EIS. This assessment and the measures provided to minimise and mitigate against potential air quality impacts would also be applicable to the additional works.

In the short-term construction period works have potential to generate dust and may cumulatively contribute to generating exhaust emissions locally. This would primarily relate to works associated with vegetation clearing, earthworks and soil disturbance, although these are not considered to be



significant in the context of the overall Project. Dust related impacts derived from the additional works may occur through:

- Excavations and 'cutting' of hardstand/road pavement resulting in dust generation;
- Excavations of soils and removal of ground cover;
- Exhaust emissions from machinery and associated transportation; and
- Material blown from the site during high winds.

The additional works are not expected to generate significant quantities of dust, especially with effective implementation of appropriate safeguards. Similarly, no significant cumulative impacts from potential construction related dust or air quality impacts are expected.

The measures and safeguards identified in the EIS applicable to erosion, sediment control and air quality/ dust, would be implemented in order to avoid and minimise potential impacts. With the implementation of effective management measures and safeguards, dust generation can be effectively controlled, and the risk minimised. This includes preparation of a detailed CEMP, to be reviewed and approved prior to any works/ activities commencing, and would include all relevant sub plans, such as:

- Soil and Water Management Plan;
- Dust/ Air Quality Management Plan.

On that basis, there is no change to the previous conclusion in the EIS.

6.2.6 SEAR 6 – Contamination

A contamination assessment was undertaken for the Project Site and presented in the EIS. The road reserves within which the works extend are not expected to be affected by any significant contamination.

Standard management measures would be required as outlined in the EIS, including an Unexpected Finds Procedure (UFP) for potential contaminated materials that shall be prepared by the contractor for use during all ground disturbance activities.

6.2.7 SEAR 7 – Ecologically Sustainable Development

An Environmentally Sustainable Design (ESD) report was provided with the EIS (EIS Appendix M). The report provides a summary of the relevant industry best practice guidelines and outlines how the design team will respond to requirements through the implementation of specific ESD measures and initiatives for Stage 1 Early and Enabling Works. Relevant aspects of this and appropriate ESD measures would also be applicable to the access and road works now being included in the Stage 1 Works scope.

The measures set out in the ESD report and policy for the Stage 1 Works that would be applied to the works include:

- Reducing energy consumption and associated CO2 emissions;
- Reducing potable water consumption;
- Reducing the impacts of materials specification (e.g. use of sustainable and low carbon materials; use of locally sourced materials; improving material efficiency);
- Reducing the generation of waste associated with the development; and
- Reducing pollution associated with the development (e.g. surface water run-off).



6.2.7.1 Principles of Ecologically Sustainable Development

The EIS addressed the principles of ecologically sustainable development contained in Schedule 2 of the EP&A Regulation 2000. The additional works have been considered and assessed in the context of the principles of ecologically sustainable development, including the precautionary principle, integrational equity, the conservation of biological diversity and ecological integrity, and improved valuation, pricing and incentive mechanisms. Inclusion of the additional works in the Stage 1 Works scope would not alter the conclusions of the EIS in this regard, and the works suitably consider and respond to these principles.

6.2.8 SEAR 8 – Biodiversity Assessment

The revised BDAR (attached at **Appendix E**) has included assessment of the minor amount of vegetation (forming a windrow to the Project Site) to be removed to facilitate the access points to the Project Site. Required vegetation clearing and disturbance is limited and no significant impacts to biodiversity, including threatened species or EPBC Act/ Matters of National Environmental Significance, are likely. Appropriate safeguards and mitigation measures, as outlined in the BDAR and EIS, would be implemented for all Stage 1 Works.

6.2.9 SEAR 9 – Aboriginal Heritage

The surrounding area includes modest ridge forms and low-lying coastal wetland lands. However, the additional works are located on highly disturbed and largely cleared land, within existing road reserves and interfacing with the Project Site.

An Aboriginal Cultural Heritage Assessment was prepared for the Project Site by Niche for the Tweed Valley Hospital (Appendix N of the EIS). The assessment included research, consultation with Aboriginal Parties and a site survey. An Aboriginal Heritage Information Management System (AHIMS) search was also conducted and provided as part of the Aboriginal Cultural Heritage Assessment and captured a broad area around the Project Site. The assessment by Niche did not identify any sources of Aboriginal heritage at or in the immediate vicinity of the Project Site.

The external road works are located in highly disturbed areas and are within the road reserve. There are no features that suggest undiscovered heritage items occur in the vicinity of the works.

The extent of previous disturbance at the works locations and lack of any evidence of Aboriginal Heritage, indicates the additional works to be included in Stage 1 present minimal risk to Aboriginal heritage; in line with *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (OEH 2010). Unexpected finds procedures should be employed as a conservative measure regarding the uncovering of potential heritage items during ground disturbance activities. The recommendations of the Aboriginal Cultural Heritage Assessment prepared for the EIS (EIS Appendix N) are applicable to all Stage 1 works and would be applied. On that basis, there is no change to the previous conclusion in the EIS.

6.2.10 SEAR 10 – Acid Sulfate Soil

The proposed access and associated road works are located within land mapped as Class 5 Acid Sulfate Soils under the TLEP 2014 shown in **Figure 6.4**. As discussed in Section 5.14.1.4 of the EIS, ASS is not typically found in Class 5 areas and these areas act as a buffer of 500m to adjacent Class 1, 2, 3 or 4 lands. ASS usually occur below five metres AHD and beneath the water table.

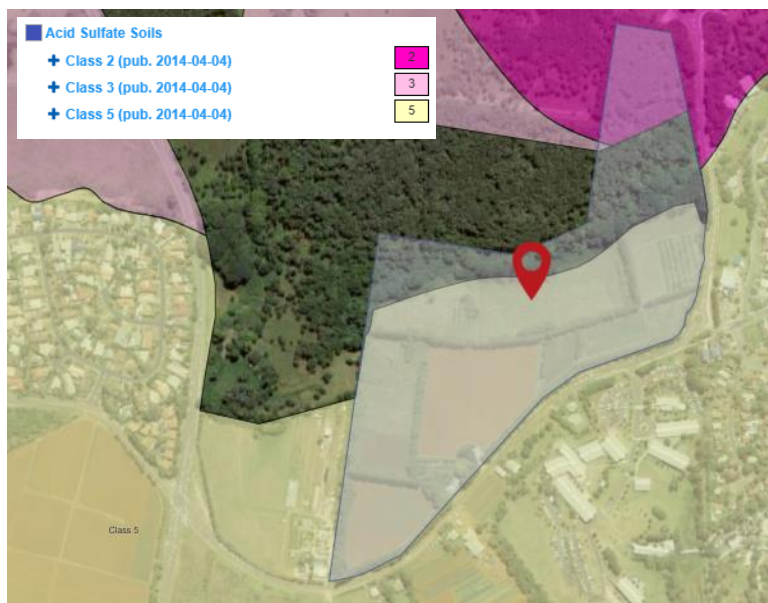


Figure 6.4 TLEP 2014 ASS mapping (DPE Online Mapping)

The additional works would require excavations and soil disturbance to create the access roads, including service works and adjustments.

The additional works are not proposed below five metres AHD or likely to lower the water table. On this basis and consistent with the EIS, an ASS investigation or management plan would not be required.

Overall, the additional Stage 1 works are not expected to impact any ASS material. Consistent with the findings of the EIS an ASS investigation or management plan is not required. Standard construction management measures as outlined in the EIS, including those for any unexpected or potential encounters with ASS, would be implemented for the Project as a whole. On that basis, there is no change to the previous conclusion in the EIS.

6.2.11 SEAR 11 - Drainage

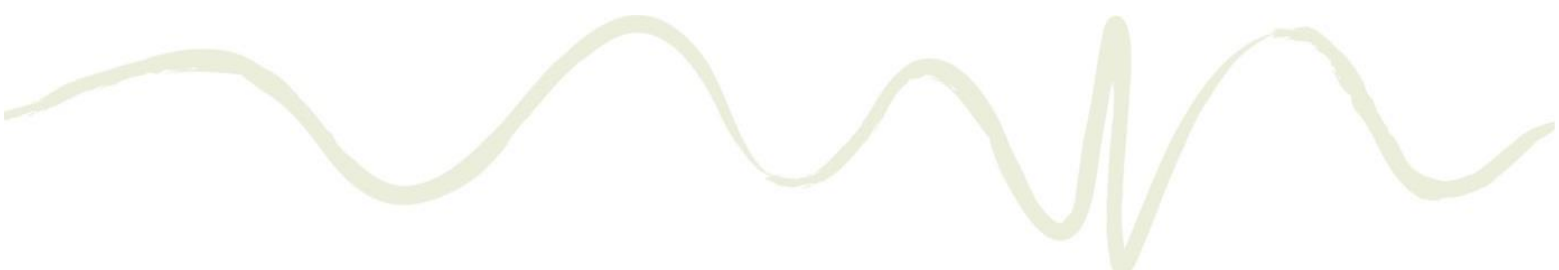
The additional works do not occur on or affect flood prone land.

A Soil and Water Management Plan, in accordance with the Landcom “Bluebook” has been prepared by Bonacci for Stage 1 Works. The proposed Soil and Water Management Plan includes various control measures to prevent sediment and pollution moving off site. Water quality monitoring would be implemented throughout the duration of the construction works in accordance with the Landcom Bluebook. For details of the proposed soil and water management, refer to Appendix B.

The Soil and Water Management Plan is to be reviewed and further developed in conjunction with the contractor to ensure that the construction methodology and all work is accounted for.

The access and associated road works do not encroach on defined water courses or waterfront land. Appropriate construction management measures and safeguards as provided in the EIS would minimise the risk of and avoid indirect impacts.

Consistent with the EIS, groundwater is not expected to be intercepted or impacted. A Dewatering Management Plan is not required.



The accesses and associated road work would integrate into existing road infrastructure and associated drainage systems. No significant impact on water quality, water bodies or hydrological processes is expected and all Stage 1 Works would be managed under a CEMP and relevant sub-plans as outlined in the EIS. Following completion of the accesses and road works, including stabilisation of disturbed surfaces, no significant drainage related impacts are expected.

Overall, the additional works to be included in Stage 1 present minimal risk to hydrology, flooding and water quality. The safeguards and mitigation measures relevant to drainage, stormwater and water resources as outlined in the EIS would be implemented for as required for applicable Stage 1 Works. The CEMP would be a comprehensive document and include various measures and protocols to effectively manage the works and avoid adverse impacts to the receiving environment. On that basis, there is no change to the previous conclusion in the EIS.

6.2.12 SEAR 12 - Waste

As outlined in Section 6.12 of the EIS, the Project and all works would be undertaken to ensure minimal impacts are generated from waste material produced on-site by ensuring that waste is minimised, collected and disposed of or recycled in accordance with NSW legislative waste disposal protocols and EPA guidelines. No materials will be used in a manner that poses a risk to the environment or public safety.

The additional works for inclusion into Stage 1 would add to, but not necessarily be limited to, the following waste streams identified in the EIS:

- Excess sediment spoils from earthworks;
- Vegetation waste;
- Demolition waste (e.g. removal of road pavement sections or services related material due to relocations);
- Construction and building waste; and
- Packaging and general waste.

All construction waste would be managed as outlined in the EIS and supporting preliminary WMP. Waste management practices will adopt the principles of reduce, reuse, recycle, treat and dispose.

The preliminary WMP submitted with the EIS, and additional waste information at **Appendix O**, provides an overview of waste management practices.

As stated in the EIS, the Stage 1 works will be undertaken by a principal contractor who will prepare their own detailed WMP once appointed. The plan would be generally consistent with the approach, principles and management methods outlined in the preliminary WMP and will include all works subject to Stage 1. It would provide further details of the management requirements for expected waste types as required.

The mitigation measures and safeguards outlined in the EIS, applicable to waste would be adopted and offer effective management of all waste potentially associated with the Stage 1 works. On that basis, there is no change to the previous conclusion in the EIS.

6.2.13 SEAR 13 Construction Hours

As outlined in **Section 5.1.2**. The additional works would occur during the revised standard construction hours of:

- 7.00 am to 6.00 pm Monday to Friday;
- 8.00 am to 1.00 pm Saturday, and
- No work on Sundays or gazetted public holidays.

6.2.14 Historical (Non-Aboriginal) Heritage

Niche prepared a Historical Heritage Assessment for the Tweed Valley Hospital Project (EIS Appendix O) that assessed the Project Site and immediate surrounds.

Searches of the Australian Heritage Database, the State Heritage Register, State Heritage Inventory and the TLEP 2014 heritage listings have been undertaken. There are no listed items within any of the registers at the Project Site or within the immediate surrounds. There are no listed items of State heritage significance located within proximity to the additional Stage 1 works that are external to the Project Site.

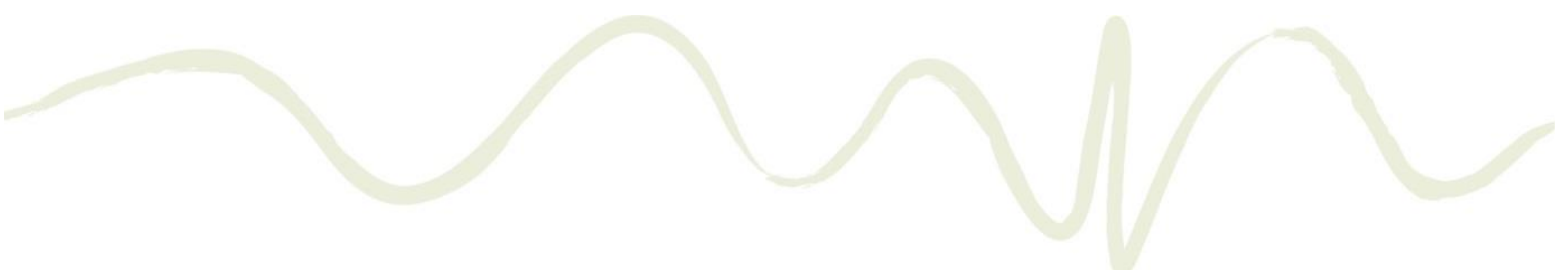
As outlined in the EIS, the Project Site was inspected on 2 August 2018 by Niche heritage consultants. Niche noted that the Project Site has been heavily modified by agricultural practices. A targeted site survey was undertaken to determine the nature and extent of historic heritage present. Figure 6.5 (as presented in the EIS) shows the result of this survey, including the presence of a dry stone wall (wall 1) that may be marginally impacted by the construction of access point 'A' to the Project Site.



Figure 6.5 Historical Heritage Assessment Survey Results (Niche 2018)

The additional works for construction of access roads to the Project Site occur adjacent to the assessed Project Site and would not impact any listed heritage items. Based on the findings of the Historical Heritage Assessment prepared for the EIS, the historical features present on the Site, do not constitute heritage listings. This includes the stone walls. The walls are not classified as 'relics' under the *Heritage Act 1977*, but 'works', and therefore do not invoke any requirements for management of relics as per that Act.

The proposed additional Stage 1 Works for construction of access roads, namely Access 'A' has the potential to result in a minor impact to the western end of Wall 1. This has been assessed as part of the Concept Proposal in the EIS and supporting Historical Heritage Assessment. Appropriate



mitigation measures have been recommended. Pending final detailed engineering and road design requirements, and construction activities, it may be necessary to demolish a small section of the western end of Wall 1 for the construction of the proposed road/ access point. As outlined in the EIS, the integrity of this part of the wall is greatly diminished by structural collapse and removal of fabric, and so the impact is considered minimal. Engineering advice has determined that the entry cannot be shifted further west. If the works affected this wall, the relevant recommendation from the Niche Historical Heritage Assessment for this wall would be adopted. Should other impacts be likely, the contractor is to confirm the potential impact areas and consult the project heritage consultant with regard to applicable mitigation measures or any obligations under the *Heritage Act 1977*, as required.

As per the findings presented in the EIS, the Project is considered to be sympathetic to the overall heritage values of the Project Site as it does not adversely impact the curtilage and has minor or no impacts to four of the five dry-stone walls.

The works would be in accordance with the recommendations of the Historical Heritage Assessment prepared by Niche for the EIS (where applicable to the Stage 1 works).

The following measure would be implemented to address potential impact to dry-stone Wall 1 (as identified on the survey):

- If the Stage 1 Works involve impact to Wall 1, an archival recording of the wall and the affected portion should be prepared before any alterations occur. Its former alignment can also be represented in a variation of the colour or surface treatment of the road. In addition, to offset the impact of demolition and obtain a positive community outcome, it is recommended that recording and reconstructing the remainder of the wall be undertaken to ensure its stabilisation and preservation for future generations, and appropriate interpretive signage be installed. This could be done in conjunction with engagement with the Australian South Sea Islander and wider community.

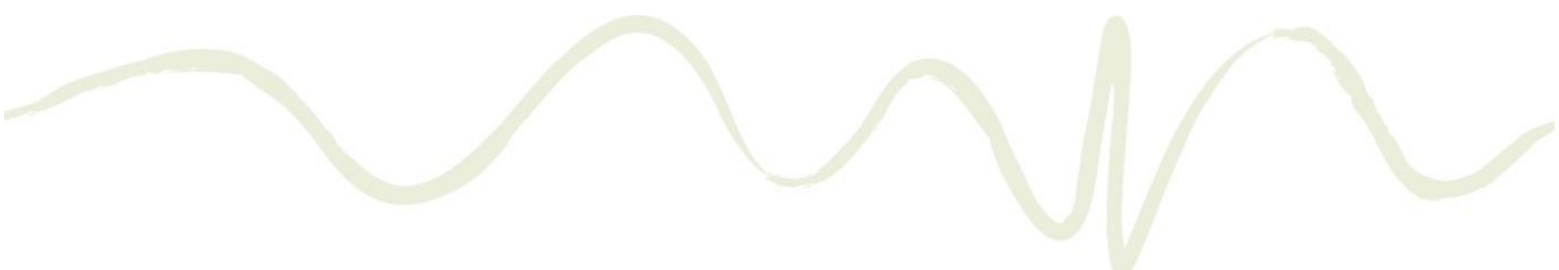
6.3 Site Contamination and Remediation

Contamination in relation to the Project Site was addressed in Section 5.12 and Appendix R of the EIS. Based on the investigations carried out by OCTIEF, the site was considered suitable for the proposed purpose (hospital), subject to implementation of a Remediation Action Plan (RAP) for a small area of soil affected by Asbestos Containing Material (ACM) adjacent to the main shed. The previously prepared RAP by OCTIEF is attached at **Appendix F**. The RAP by OCTIEF outlined remediation works which are considered Category 2. The scope included excavation and disposal of asbestos contaminated soil to the west of the farm shed.

Whilst remediation work undertaken to date on the Project Site is consistent with the 'secure and make safe' basis for preliminary works, in response to submissions and agency advice, remediation work for the soil adjacent to the shed is now proposed to be included in the SSDA and undertaken as part of the Stage 1 Works (rather than separate preliminary works). This would be in accordance with the RAPs prepared by OCTIEF and Cavvanba (included at **Appendix F**). Given the remediation strategy is similar, the most recent RAP prepared by Cavvanba supports the RAP by OCTIEF.

The scope of work by Cavvanba included:

- Review of a previous environmental investigation (OCTIEF, 2018).
- Completion of a comprehensive site walkover and visual inspection for key features to identify potential areas of environmental concern on- and off-site.
- Advancement of 21 soil test pits using a hand auger in a staged investigation.

- 
- Collect and analyse samples for potential contaminants of concern, which will assist in the classification of any material required for offsite disposal.
 - Inclusion of the results and findings into a report.

The analytical results were compared to residential land use with minimal opportunities for soil access land use for human health screening (HIL A), urban residential and public open space environmental screening (EIL), and site-specific asbestos criteria and have been provided in Section 2.5.3 of the RAP.

Following this soil investigation and the previous investigation (OCTIEF, 2018), asbestos contamination is believed to be limited to:

- approximately one metre from the north-eastern wall of the farm shed;
- approximately three metres from the south-western wall of the farm shed; and
- no deeper than 0.3 m below the ground surface.

Based on the results of the investigations conducted by Cavvanba and OCTIEF, contamination is estimated to be less than 100 m³ of soil, limited to the apron of the farm shed, to an approximate depth of 0.3 m.

The nature of asbestos contamination is considered to be ACM in soil. Whilst it is recognised that asbestos fibres have been detected in laboratory analysed soil samples, the presence of fibres is expected to be the ACM, rather than a friable asbestos source such as pipe lagging or loose insulation. The condition of the ACM as observed, did not appear to be highly weathered or pulverised. The detection of fibres in soil associated with ACM therefore does not represent an elevated risk of generating airborne fibres, and the material should otherwise be treated as bonded asbestos.

Investigation beyond the immediate perimeter hasn't been undertaken at TP32 due to presence of an access road. Determination of the extent in this area will be undertaken during the proposed remediation.

Based on the detection of asbestos fibres in the soil around the former farm shed, remediation and/or management is required.

The remediation goal for the site is to:

- render the site suitable for the intended land use (for conservative purposes, residential with garden/accessible soils);
- remove any unacceptable risk to human health and environment associated with contaminated material; and
- ensure protection of the remediation team, surrounding community and the environment throughout the remediation works.

The remedial strategy of off-site disposal is considered to meet the remedial requirements and be acceptable for the proposed development. The full remedial strategy is outlined in the appended RAPs. In addition to this, Andrew Lau, of JBS&G Australia Pty Ltd (JBS&G), has been engaged by Health Infrastructure to conduct a site audit of the Project site. This audit involves a comprehensive review of all contamination reports undertaken for the project. JBS&G has issued an Interim Audit Advice (refer Appendix F) stating that provided updated reports are received that satisfactorily address comments issued by the auditor, it is anticipated that a Site Audit Statement (SAS) and accompanying Site Audit Report (SAR) can be issued for the Project site in mid-February 2019.



6.4 Biodiversity Additional Information

6.4.1 Revised Biodiversity Development Assessment Report (BDAR)

Greencap Pty Ltd (Greencap) was commissioned to prepare a Biodiversity Development Assessment Report (BDAR) for the SSDA in accordance with the Biodiversity Assessment Method Order 2017 (Office of Environment and Heritage [OEHa], 2017) (BAM), and to address more broadly the requirements in the *Biodiversity Conservation Act 2016* (NSW) (BC Act). The BDAR was submitted with the EIS and provided to OEH for review at the time of lodging the SSDA.

In accordance with the BAM, the Project has been located in order to avoid and minimise impacts upon biodiversity. The first phase in avoiding impacts on biodiversity started with the site selection and due diligence process. One of the four key criteria for this process was avoiding and minimising impacts on biodiversity.

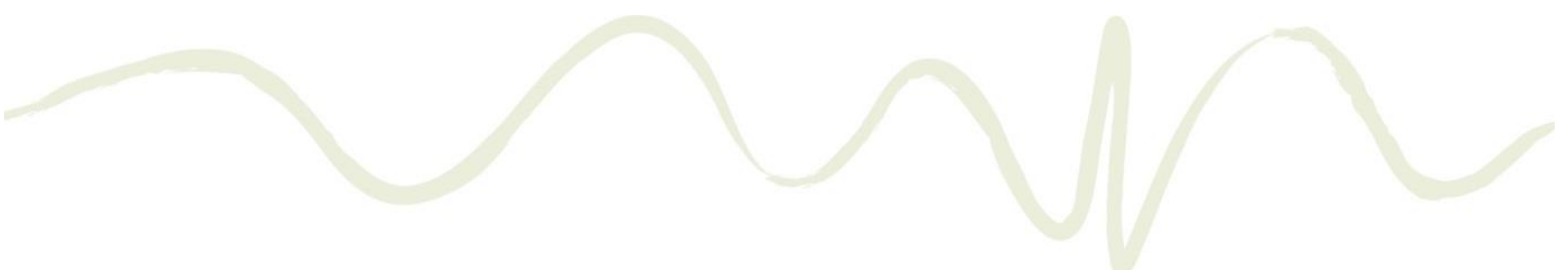
OEH conducted a comprehensive review and provided comments on the submitted BDAR. The revised BDAR and written response to government agency submissions by Greencap (including responses to OEH's comments on the BDAR provided in Appendix 1 of their submission) have been considered and responded to (refer to **Appendix E**). This includes, but was not limited to:

- Surveying of additional threatened species;
- Inclusion of mitigation measures particularly regarding the impact of vehicle strikes as well as habitat connectivity. A range of traffic calming and visibility measures that mitigate the risk of vehicle strikes have been proposed including: installation of roadside street lighting, installation of wildlife warning signs, speed limit signs and two permanent radar speed signs that display vehicle speed on approach and/or display a warning when the vehicle speed on approach is greater than the speed limit;
- Recommendations around the establishment of a wildlife corridor along the western boundary of the Project site;
- Additional information regarding impacts on water quantity and water quality; and
- Addressing technical matters of the BAM and BDAR.

For the purposes of the revised BDAR, the subject land (the Site) is defined as the Project Site (i.e. Lot 11 DP 1246853) plus the Tweed Coast Road Crown Road Reserve (TCR Site). The TCR Site has been included in response to submissions/advice and for completeness as an upgrade to the Tweed Coast Road/Cudgen Road intersection (and applicable approaches) has been identified as part of the Project and Concept Proposal. These two development areas (the subject land) are collectively referred to as the Site throughout the BDAR.

The total area of the TCR Site is 0.29 ha and captures proposed roadworks and pavement widening to the west of the Project Site, part of which includes the removal of a tree on the road reserve.

Furthermore, as indicated above, the revised BDAR has been informed and supported by additional surveys, including those by specialist ecological and species experts. Amongst this, was an opportunistic recording of Mitchell's rainforest snail *Thersites mitchellae* on 19 November 2018 by Dr Licari and David Milledge. One live specimen was recorded in a portion of Zone 2 and one dead shell was recorded in Zone 3 (i.e. outside of the Project footprint). A targeted nocturnal spotlight survey for Mitchell's rainforest snail *Thersites mitchellae* was conducted on 17-18 December 2018 by Dr Licari and Kyle Spiteri in both Zones 4 and 8. Additional targeted diurnal and nocturnal surveys for the snail concentrating on Zones 4 and 8 were then undertaken on 19-20 December 2018 by Dr Stephanie Clark, a specialist in invertebrate identification. The targeted surveys conducted by Dr Clark included



active diurnal habitat searches of logs, rocks, debris and leaf litter on the ground and a nocturnal spotlight survey for active snails. The target species was not detected in either of the above surveys (as outlined in the BDAR). All surveys undertaken, including a detailed summary of the survey effort (including additional work since the original BDAR) and method is provided in the revised BDAR.

Based on the revised BDAR and consistent with the original assessment, the Project has been located on the Site to minimise direct impacts upon EECs. The development will directly impact 0.95 ha of components of PCT 1302 in Zone 4 and 8 that has been identified as an EEC in two vegetation zones located in windrows. The Vegetation Integrity (VI) score for Zone 4 is below the assessment threshold for a TEC. Direct impacts on the other six vegetation zones have been avoided and minimised.

An assessment of prescribed impacts was undertaken, including on any prescribed impact on water quality, water bodies and hydrological processes that sustain threatened species and threatened ecological communities. The BDAR in Section 3.2.5 addresses impacts to the proximity area for mapped Coastal Wetlands as part of the broader impact assessment for the Project.

As outlined in the EIS and BDAR, water impacts will be managed during both the construction and operation stages. The impact of the development on water quality, water bodies and hydrological process that sustain threatened species and threatened ecological communities is, on balance, a positive impact. On this basis, the potential residual prescribed impact of the Project is considered to be negligible. Recommendations for adaptive management have also been identified.

A total of three ecosystem credits and 14 species credits were generated by the BAM calculator.

A decrease in vegetation integrity score for the 0.55 ha portion of Zone 4 and 0.40 ha portion of Zone 8 is due to the proposed clearing of native vegetation within these vegetation zones. However, the current VI score for Zone 4 falls below the assessment threshold for Endangered Ecological Communities (i.e. $VI \geq 15$), therefore in accordance with the BAM, no further assessment was required for these vegetation zones and it does not require offsetting. The current VI score for Zone 8 exceeds the assessment threshold for Endangered Ecological Communities (i.e. $VI \geq 15$) and requires offsetting.

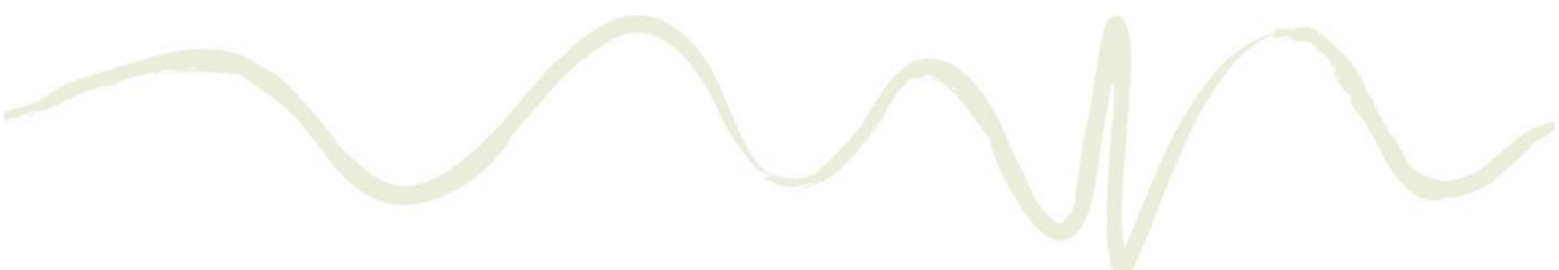
Fourteen threatened species credits were generated by the calculator based on assumed presence (i.e. powerful owl *Ninox strenua* and three-toed Snake-tooth Skink *Coeranoscincus reticulatus*). Two threatened species credits were generated from confirming presence through a survey (i.e. stinking cryptocarya *Cryptocarya foetida*).

The Project has the potential to cause some prescribed impacts, however, mitigation measures including adaptive management strategies will reduce the likelihood and consequence of any residual impacts to low levels that do require an offset.

The revised BDAR has been peer reviewed by Dr David Robertson of Cumberland Ecology (also included at **Appendix E**). The reviewed concluded that the BDAR has adequately addressed all relevant matters.

6.4.2 Matters of National Environmental Significance

Under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), any action that has, or is likely to have, a significant impact on matters of National Environmental Significance or other aspects of the environment, such as on Commonwealth land, may progress only with approval of the Commonwealth Minister for the Environment under Part 9 of the EPBC Act. The EIS submitted as part of the SSDA determined that that there would be no significant impact to



matters of National Environmental Significance or Commonwealth land. For completeness and in response to submissions, an additional assessment of Matters of National Environmental Significance (MNES) as listed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) has been prepared by Greencap for the Project and is included as part of **Appendix E**.

The Protected Matters Search Tool (PMST) was used by Greencap to generate a report to determine whether MNES species protected under the EPBC Act were likely to occur within a five kilometre radius of the Site. Based on the PMST there were 57 threatened species (32 fauna species and 25 flora species) and 29 migratory species that were listed under the EPBC Act as likely to occur in the area. With the exception of three observations of the three-veined laurel *Cryptocarya foetida* plant there were no MNES threatened flora species recorded during the targeted site surveys. It was assessed that the Project would not have a significant impact on *Cryptocarya foetida*, based on addressing the MNES Significant Impact Guidelines 1.1 criteria.

Of the 32 fauna species that were likely to occur in the area, the findings were as follows: 27 species were either not present or were unlikely to be present on-site based on the lack of suitable habitat for these species; one species, the grey-headed flying-fox (*Pteropus poliocephalus*) was likely to be present on-site but it was assessed that the Project would not have a significant impact on this species; and, the presence of four species were assessed as 'possible', including the Koala (*Phascolarctos cinereus*). However, it was assessed that the Project would not have a significant impact on this species. It was further assessed that the other three 'possible' species (the Southern Pink Underwing Moth, Southern Black-Throated Finch and Fleay's Frog) would not be significantly impacted by the Project because the habitat in the directly impacted Zones 4 and 8 was not likely to be utilised by these species. The Mitchell's rainforest snail (*Thersites mitchellae*) was recorded within the wetland area. However, this species was surveyed for by nocturnal spotlight survey and diurnal habitat searches and was not found within the development footprint area (Greencap 2019). It was assessed that the Project is unlikely to have any significant impact on this species. A targeted survey for the Mitchell's rainforest snail was also undertaken by Dr Stephanie Clark of Invertebrate Identification Australasia on the 19 and 20 December 2018. The purpose of the survey was to determine the nature and extent of habitat and potential habitat for the species on the subject site, particularly within corridors of regenerating rainforest that form narrow strips across the proposed development area. The findings of the survey are contained within a report attached to the peer review of the MNES report (refer **Appendix E**). The report found that the proposed development area has been extensively cleared and the remaining corridors of rainforest regeneration occur on well drained land that is relatively dry. They are not suitable habitat for the Mitchell's rainforest snail

An assessment of potential indirect and offsite impacts of the Project was undertaken e.g. water quality, water bodies and hydrological processes that sustain threatened species and TECs in the offsite areas. The Project has the potential to cause some indirect and offsite impacts, however, due to mitigation measures including adaptive management strategies it has been assessed that the Project will not have any significant indirect impacts on MNES entities.

The MNES report by Greencap was peer reviewed by Dr David Robertson of Cumberland Ecology (refer **Appendix E**). The peer review stated that no significant impact is likely to occur to either EPBC-listed lowland rainforest or Mitchell's Rainforest Snail as a result of the construction of the proposed development and further concurred with the main conclusions of the MNES report prepared by Greencap (2018).



6.5 Separate Preliminary Works and Potential Cumulative Impact

As outlined in Section 3.5 of the submitted EIS, following acquisition of the Project Site, Health Infrastructure has commenced separate Preliminary Works, including those to ensure appropriate environmental and stormwater control measures are in place. This works are being carried out based on expert stormwater engineering and ecological opinion that the erosion and sediment control works are necessary to mitigate pre-existing environmental and ecological risks at the Site in its current state. These stormwater management works were not being undertaken for Project purposes, but rather to discharge HAC's obligations as occupier and landowner to protect the Site and adjacent environmentally sensitive areas.

These include:

- Site establishment including fencing/hoarding of Project Site;
- Set-up temporary accommodation and amenities to service the Preliminary Works;
- Temporary construction car parking and access;
- Temporary stormwater drainage (for site compound);
- Temporary site electricity supply;
- Demolition of existing on-site buildings and structures including remediation of contaminated land; and
- Soil and water management works including sediment basins and associated works to mitigate potential impacts of stormwater runoff from the unimproved site.

Many of these Preliminary Works are exempt or complying development and relatively minor, with the soil and water management works being undertaken as Development without Consent under Part 5 of the EP&A Act and the relevant provisions of Statement Environmental Planning Policy (Infrastructure) 2007 (ISEPP).

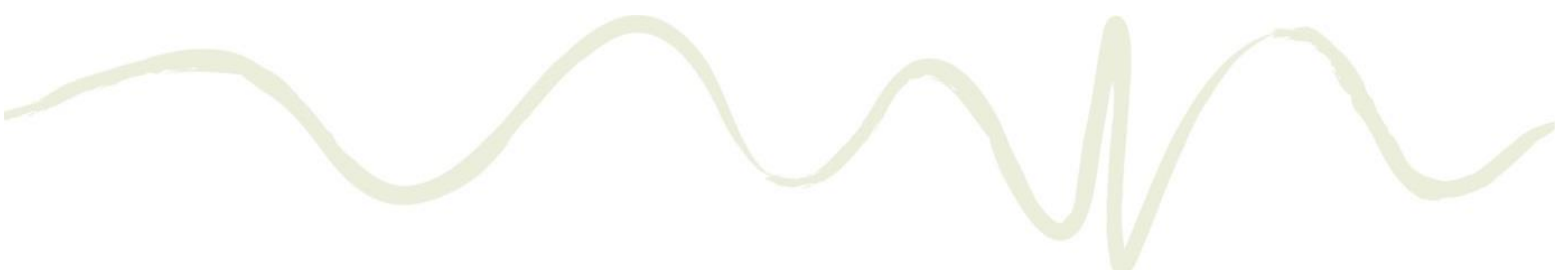
A complying development certificate has been issued for the relevant Preliminary Works under the exempt and complying development provisions of SEPP (Exempt and Complying Development Codes) 2008, including demolition.

Pursuant to the ISEPP and Part 5 of the EP&A Act the soil and water management works under were assessed as part of a Review of Environmental Factors (REF) and reviewed/ approved by Health Infrastructure as the determining authority.

Whilst these works are undertaken separate to and in advance of the Tweed Valley Hospital Project, the environmental assessment undertaken (REF) for the soil and water management works, including sediment basins and associated works to mitigate potential impacts of stormwater runoff from the unimproved condition of the site, had regard for potential cumulative impacts. The REF was prepared in the context of the separate Tweed Valley Hospital Project and supporting EIS, therefore taking into account potential cumulative impacts.

Section 7.4 of the EIS also considered potential cumulative impacts from other major approved developments, as well as the general potential future growth/ development of the locality.

Given scope of Preliminary Works and expected timing (completion in February), no significant overlap with works associated with the Tweed Valley Hospital Project (pending determination of the SSDA) is expected. This greatly reduces the likelihood of amenity related cumulative impacts that could be generated if different works or multiple projects overlap and contributed to potential noise, traffic and dust generation. The EIS and REF also state that the relevant CEMPs are to include



measures to review and address the potential for cumulative impacts should such a scenario of works/projects occurring in parallel potentially occur.

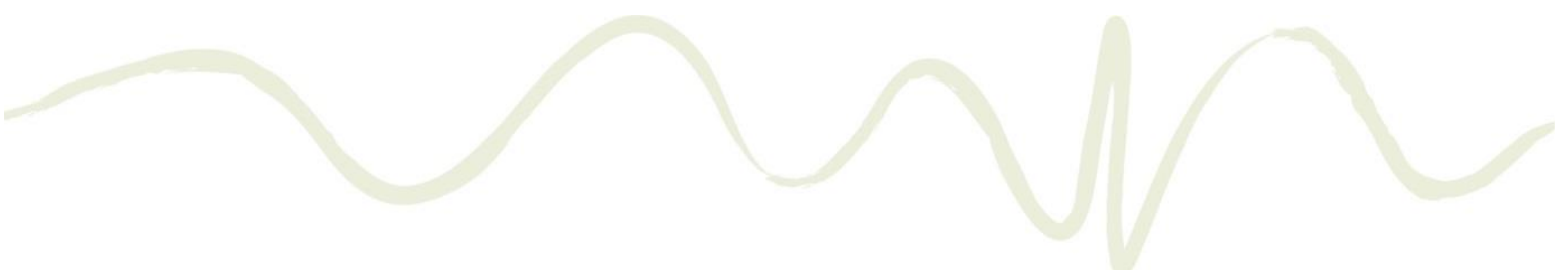
The soil and water management works as part of the Preliminary Works occur in highly disturbed areas and have the purpose of mitigating current impacts to the receiving environment associated with unmanaged runoff from the previously cultivated land. These works were assessed to have minimal direct impact on the natural environment given the condition of the site and potential impacts can be effectively avoided or minimised through the implementation of safeguards and mitigation measures. The site and area of these works is disturbed and modified. The immediate footprint of these Preliminary Works is not considered to be environmentally sensitive, however the potential sensitivity of the receiving environment to indirect impacts were considered and would be managed. Vegetation removal is limited and does not impact significant vegetation or habitat, nor would these works amount to any significant cumulative effect in the context of the Tweed Valley Hospital Project given the sediment basins would eventually be augmented (as described previously) to fulfil the future purpose of managing stormwater runoff from the hospital (as presented in the Concept Stormwater Management Plan for the proposed Tweed Valley Hospital). Furthermore, the BDAR for the Tweed Valley Hospital Project assessed the whole Project Site, including the interface with the vegetated environmental area and mapped Coastal Wetland. Separate ecological assessment of the Preliminary Works found there would not be significant impacts.

Whilst the sediment basin works occur near to mapped Coastal Wetlands and potentially sensitive receiving environments, the construction activities can be managed in a manner that reduces risk and avoids significant impact. The completion of the works (expected in February) and function of the sediment basins would result in improved environmental outcomes for the receiving environment and wetland area. Furthermore, these basins would be augmented and incorporate associated stormwater infrastructure in the future to form part of the soil and water management measures for the Project at applicable stages.

The Preliminary Works are not associated with introducing a new use or changing the intensity of a land use, but rather are to implement appropriate environmental controls on the site and assess the immediate need for this as based on expert advice. Therefore they do not result in operational related cumulative impacts when viewed in the context of the Tweed Valley Hospital Project.

Short-term physical construction impacts can be adequately addressed through the implementation of management controls, including soil and water and construction noise measures. As outlined in the EIS, the CEMP and CNVMP would include measures to consider and review potential cumulative impacts in the context of any other potential construction works which may occur concurrently in proximity and contribute to potential effects on amenity. Whilst the duration of Preliminary Works is not expected to overlap with Stage 1 works associated with Tweed Valley Hospital Project that is subject to a SSDA (and pending determination), the Preliminary Works would be followed by Stage 1 works for the Tweed Valley Hospital, meaning a moderately longer duration of work on the site. Nonetheless, all reasonable and practicable management and mitigation measures, as recommended by relevant specialist reports and refined by the applicable Construction Environment Management Plans and subplans, would be implemented.

Overall the separate Preliminary Works are not significant in scale and affect already highly disturbed areas on the site. They address existing conditions and an immediate need following acquisition of the Project Site to ensure sound environmental management. It is possible that the activity could add to a number of typical cumulative impacts in a minor way, including resource consumption, generation of greenhouse gas emissions, and construction related amenity impacts. However, given it is unlikely that Preliminary Works would extend beyond February, these works are not expected to concurrently occur during other Stage 1 works associated with the Tweed Valley Hospital Project (pending its



determination). Hence, significant cumulative impacts as a result of the two projects and work programs are not expected. The mitigation measures and safeguards outlined in the EIS for Stage 1 Works and those included in the REF (including conditions of its approval) would effectively avoid, minimise or mitigate the extent to which works on the Project Site contribute to cumulative environmental impacts.

The following measure included in both the EIS and REF addresses potential cumulative impacts as a result of construction activities (both on and surrounding the Project Site):

- The CEMP would incorporate measures to manage potential cumulative construction impacts. The CEMP and relevant sub-plans would be reviewed and updated as required (such as when new work begins or if complaints are received) to incorporate potential cumulative impacts from surrounding development activities as they become known.



Copyright and Usage

©GeoLINK, 2019

This document, including associated illustrations and drawings, was prepared for the exclusive use of Health Infrastructure to address the submissions received following the public exhibition of the State Significant Development (SSD) Application (SSD 18_9575) for the new Tweed Valley Hospital. It is not to be used for any other purpose or by any other person, corporation or organisation without the prior consent of GeoLINK. GeoLINK accepts no responsibility for any loss or damage suffered howsoever arising to any person or corporation who may use or rely on this document for a purpose other than that described above.

This document, including associated illustrations and drawings, may not be reproduced, stored, or transmitted in any form without the prior consent of GeoLINK. This includes extracts of texts or parts of illustrations and drawings.

Topographic information presented on the drawings is suitable only for the purpose of the document as stated above. No reliance should be placed upon topographic information contained in this report for any purpose other than that stated above.



Appendix A

Submissions Coding Framework



Appendix B

Updated Project Plans



Appendix C

Updated Survey



Appendix D

Architectural and Urban Design Response



Appendix E

Biodiversity Response and Additional Information



Appendix F

Contamination Response



Appendix G

Civil Engineering Response



Appendix H

Heritage Response



Appendix I

Hydraulic and Fire Services Response



Appendix J

Agriculture Response



Appendix K

Land Use Conflict Risk Assessment Response



Appendix L

Noise and Vibration Response



Appendix M

Social and Economic Response



Appendix N

Traffic and Transport Response



Appendix O

Waste Management and Other Responses



Appendix P

Electrical and Underground Petroleum Response



Appendix Q

Aviation Response



Appendix R

Additional Geotechnical Investigations