



## Appendix D

# Biodiversity Assessment

TSA Management  
Tweed Valley Hospital  
771 Cudgen Road  
Cudgen NSW 4895

24 September 2019

To Whom it May Concern,

## Re: Statement on Biodiversity Impacts for the Concept Proposal (SSD-9575) Modification Application Report

Greencap has reviewed the proposed detailed design for the Tweed Valley Hospital Stage 2 application (SSD-10353) and note that there are several modifications from the approved Stage 1 Concept Proposal (SSD-9575).

To compare approved and modified envelopes, we have assessed the approved maximum planning envelopes in the Masterplan Concept Plan drawing AR-SKE-10-006[07] against the Proposed Site Plan STB-AR-SKE-PRW-1000015A[01], as illustrated in the Revised Planning Envelope Plan drawing AR-SKE-10-010[03]1 and AR-SKE-50-501[04] Revised Planning Envelope Elevations. An impact assessment of the list of proposed modifications, shown in **Table 1** was also undertaken to evaluate whether these modifications would generate biodiversity impacts that were not previously assessed as part of the Stage 1 EIS and Biodiversity Development Assessment Report (BDAR).

**Table 1 Proposed modifications to the concept design and impact assessment**

Change (amendments and inclusions) (STH-BS 2019) <sup>1</sup>	Proposed modification impact assessment	Justification
Additional carparking and carparking reconfiguration, including multi-deck carpark (up to 10 storeys in height), at-grade and short term parking facilities, as well as on-site road network design refinements.	No additional impact.	Car parking reconfiguration and road network modifications occur within the previously approved development footprints and remain approximately 47m from the remnant vegetation to the north of the site.  The addition of a multi-deck carpark maximum planning envelope will replace the expansive on-grade parking thus reducing the site footprint, will not encroach on any retained native vegetation and will not require clearing of additional native vegetation. The multi-deck carpark is approximately 30m tall reducing in height with adjacent site topography which is to be minimally modified. Due to the location of the changes, shadow studies of the revised Masterplan Concept (Planning Envelope) identified minor shadow casting at 9am on the winter solstice that affects neighbouring land to the west, as a product of the low angle of the sun at that time of year (STH-BS 2019).

<sup>1</sup> Silver Thomas Hanley, Bates Smart (STH-BS) (2019) Tweed Valley Hospital NSW Architectural and Urban Design Report EIS Concept Modification Submission. Rev 1.

Change (amendments and inclusions) (STH-BS 2019) <sup>1</sup>	Proposed modification impact assessment	Justification
Addition of an envelope for the 'Tweed Valley Skills Centre' temporary building.	No additional impact.	The additional envelope for the temporary building will not encroach on any retained native vegetation and will not require clearing of additional native vegetation. Furthermore, it is located at the far south of the site (in close proximity to the Kingscliff TAFE campus) and will not have any significant indirect impacts on remnant vegetation to the north of the site, retained windrows, vegetated buffers or threatened species.
Hospital bed number increase from 430 to 499 day only and overnight beds (excluding emergency beds).	No additional impact.	An increase in hospital beds will not create any material additional impacts that have not been addressed in the Stage 1 and Stage 2 BDARs.
Amendments to the approved maximum Planning Envelope including; Massing of the Main Hospital building, Health Hub envelope, and expansion of the Electrical Switching Station Planning Envelope located at basement and lower ground levels to the west of the building, now renamed Essential Energy Switching Compound (EESC). The EESC will incorporate additional electrical services infrastructure and HV electrical backup generators with associated below ground fuel supply located beneath the adjacent roadway service layby.	No additional impact.	The amendments to the Planning Envelope will not impact adjacent vegetation buffer zones (10m wide to the west and 30m wide to the south). Furthermore, modifications accommodate future buffer widening to the west of the compound should this be required.  Generators will be provided in acoustic attenuated housing, further enclosed by compound screening and landscaping to mitigate noise impacts.  Adjustments/refinements to these envelopes are minor in nature and will not create any material additional impacts that have not been addressed in the Stage 1 and Stage 2 BDARs.
Increase maximum Gross Floor Area (GFA) of permanent buildings from 65,000m <sup>2</sup> to approximately 65,050 m <sup>2</sup> (GFA, as defined in the Standard Instrument: Principal Local Environmental Plan as at the date of this development submission).	No additional impact.	The increase in GFA will not encroach on any native vegetation and does not require additional clearance of remnant vegetation to the north of the site, retained windrows or vegetated buffers. Furthermore, any change to indirect biodiversity impacts is considered negligible.
Amendments to the Landscape Zonal Plan (LZP) <sup>2</sup> , to include:  1. Modification to and refinement of the east end of the site, including specification of low maintenance native landscaping  2. Two types of native landscaping treatment defined, including; "hydromulched/drill seeded lawn"	No additional impact.	The key biodiversity attributes to the LZP remain unchanged, including; the retained forest (zone 1), 10m and 30m buffers (zones 7 and 8), rain gardens (zone 2b) and clusters of native plantings (zone 10).

<sup>2</sup> Turf (2019) Landscape Zonal Plan Drawing no. LS-DWG -10-003 Rev 8.

Change (amendments and inclusions) (STH-BS 2019) <sup>1</sup>	Proposed modification impact assessment	Justification
and "lawn with clusters of native planting". 3. 30m vegetated buffer along Cudgen Road extended south to meet the west title boundary		

Having undergone Schematic Design, the Tweed Valley Hospital Stage 2 application has remained generally consistent with the original masterplan concept intent. We have assessed the proposed modifications to the Concept Proposal and have determined that these modifications do not introduce any additional significant biodiversity impacts that have not been assessed in the Stage 1 BDAR.

Furthermore, it is noted that a revision of the Stage 1 BDAR is being prepared for the Stage 2 application (Stage 2 BDAR) that considers all additional information regarding detailed design for construction and operations of the Project. This Stage 2 BDAR will be submitted with the Stage 2 SSD application.

Regards,



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