

18 January 2019

Sue Folliott TSA Management Pty Ltd

Via email: sfolliott@tsamanagement.com.au

Dear Sue,

# Re: Agency and Tweed Shire Council responses to Tweed Valley Hospital – Aboriginal and historical heritage assessment reports and Additional Information

Thank you for the response concerning the Aboriginal and historical (non-Indigenous) cultural heritage assessments prepared for the Tweed Valley Hospital Project (TVH or 'the Project'). We provide the following feedback in relation to Office of Environment and Heritage (OEH), NSW Heritage Council and Tweed Shire Council (TSC) responses.

Issue	Agency	Response
Aboriginal Heritage		
OEH notes the assessments was undertaken to identify, describe and document Aboriginal heritage values within the project area was undertaken in consultation with Aboriginal people in accordance with the SEARs. The OEH acknowledge 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 (4) precautionary recommendations. The OEH supports this approach.	OEH	The Aboriginal heritage assessment was prepared in compliance with the current Aboriginal heritage guidelines in NSW. The OEH supports the Project to proceed following precautionary principles noted in the assessment report recommendations. The ACHAR complies with the current Aboriginal cultural heritage guidelines for NSW and does not require change.
The application incorporates referencing of some outdated plans and does not take a wide enough view of the landscape (1km required).	TSC	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.
It is recommended that the Department of Planning and Environment (DP&E) 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to reference Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 guideline rather than the superseded draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC 2005) within the ACHAR and the assessment report be updated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.	TSC	The assessment complies and ACHAR complies with the current Aboriginal cultural heritage guidelines for NSW. No further updates are required.
The Burra Charter (Section 12) It is recommended that the Department of Planning and Environment (DP&E) require that the Section 12.4	TSC	Aboriginal perspectives have been included following the consultation process as set out in the NSW Aboriginal Cultural Heritage Consultation guidelines.



Issue	Agency	Response
be updated to reflect the significance from the perspective of Aboriginal people.		Information provided by Aboriginal representatives was included in the reporting process.
Approach: 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 National Parks and Wildlife Act, 1974. Any actions or recommendations of the Aboriginal cultural heritage assessment undertaken in support of the application are to be followed and implemented.	TSC	The Aboriginal assessment report includes provision for 4 precautionary principles to be implemented for inductions and stop works procedures for unexpected finds. This is also supported by OEH.
European Heritage		
NSW Heritage Council state that "Walls 1, 3 and 5 will be either partially or completely removed".	NSW Heritage Council	The Historical Heritage Assessment indicates that based on the concept design Walls 1 and 3 may be impacted and Wall 4 will be completely impacted. Section 8.2 of the Historical Heritage Assessment recommends a range of measures to mitigate any impacts to the identified heritage values of the Project Site.
		The Historical Heritage Assessment noted that the development proposal is considered to be sympathetic overall to the 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.
It is likely that the dry-stone walls mentioned above would reach the threshold of local significance. As such, it would be preferable to retain these walls as they represent a significant phase of the sites usage and social history of the region. A condition should be	NSW Heritage Council	The Historical Heritage Assessment already recommends opportunities to further minimise impacts to the drystone walls be explored during future detailed design stages.
included requiring the applicant liaise with Tweed Shire Council on how to best retain and interpret these elements with the proposed development.		NSW HI 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.
The creation of an Unexpected Finds Procedure must be conditioned to manage any historical archaeological works or relics discovered during works.	NSW Heritage Council	The Historical Heritage Assessment already recommends that a process for managing the discovery of any relics be included in any environmental or other plans for the Project works. This would be implemented as part of the Construction Environmental Management Plan for the Project.
A more technical evaluation of the area is required	TSC	The Historical Heritage Assessment was prepared as per standard practice in NSW, including the NSW Heritage Manual, and reflects requirements set out for standard assessments of this type including those prepared for SSD and EIS generally in NSW.



Issue	Agency	Response
It is recommended that the Department of Planning and Environment (DP&E) 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.	TSC	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.  As noted in the response above to the NSW Heritage Council NSW HI 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.  Section 8.2 of the Historical Heritage Assessment recommends a range of measures to mitigate any impacts to the identified heritage values of the Project Site.
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.	TSC	This is a commitment that NSW Health Infrastructure can make and assert though it is not something that should be reflected in the assessment report.
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).	TSC	No heritage listed items occur on or in the immediate vicinity of the Project Site. A CMP is a standard tool for stating the required conservation principles and processes to follow to manage change on significant heritage places.  A Conservation Management Plan is not warranted or considered necessary.  As noted in the response above to the NSW Heritage Council NSW HI 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.  Section 8.2 of the Historical Heritage Assessment recommends a range of measures to mitigate any impacts to the identified heritage values of the Project Site.
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).	TSC	Archival recording prior to any planned disturbance is a common practice in NSW. It is already recommended in the Historical Heritage Assessment that this takes place including for Wall 4 which has been identified as having the most impacts, based on existing Masterplan and design information.

#### **Additional Information**

The following works areas were also assessed by Niche (2018a) in a Historical Heritage Assessment (HHA) for the Project Site:

- 1. Site access point (Access 'A') from Cudgen Road,
- 2. Site access point (Access 'D') from Turnock Street roundabout.



Additional of proposed upgrades to the intersection of Tweed Coast Road/ Cudgen Road were also assessed by Niche (2018b) in a Statement of Heritage Impact (SOHI) in accordance with Statements of Heritage Impact guidelines published by the NSW Heritage Office and Department of Urban Affairs & Planning (1996, revised 2002), originally published as part of the NSW Heritage Manual.

#### Access points A and D

The HAA assessed the Project Site and immediate surrounds. This included the two access roads marked now as Access 'A' and 'D' as indicated in Figure 1 below.

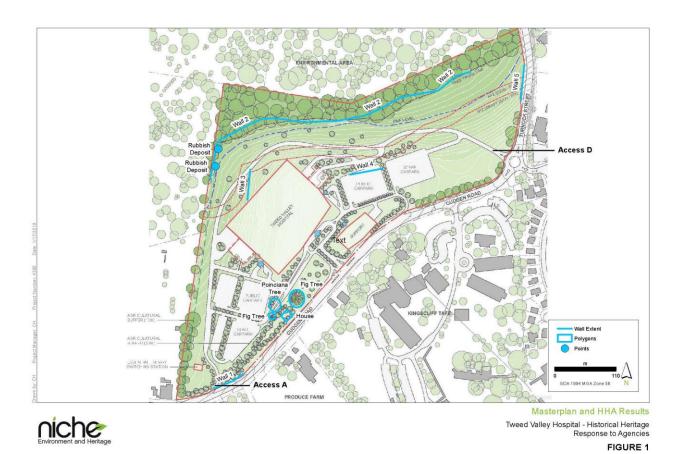


Figure 1. Access A and D identified on the Master Plan and Niche (2018a) HHA results

The construction of these access roads into the Project Site will not impact any heritage-listed places or items. As per the findings presented in the HHA (Niche 2018a), the Project was assessed to be sympathetic overall to the identified 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 identified in the assessment.

With regard to Access points A and D, the proposed construction of the Access 'A' has the potential to result in some minor impact to the western end of a dry-stone wall (Wall 1). This impact was assessed as part of the Niche (2018a) HAA. In summary, and pending final engineering and road design requirements, and detail on construction activities and methods, it has been identified that:

• Demolition of a small section (1-2m) of the western end of Wall 1 (total measurement of 64m in length) may be required to facilitate the construction of the proposed road/ access point.



- The affected section is described in the HHA as "low (single course) and partially collapsed" (Niche 2018a:25).
- The condition of this section of Wall 1 was therefore noted in the HHA as "highly degraded" (Niche 2018a:46).
- The proposed impact of Access 'A' on the assessed significance of Wall 1 was therefore determined to be minimal (Niche 2018a:46).

If the Project Site works affect this wall, the relevant recommendations for Wall 1 in the Niche (2018a) HHA would be adopted. Should other impacts be likely, the contractor is to confirm the potential impact areas and consult a heritage consultant with regard to applicable mitigation measures or any obligations under the Heritage Act 1977, as required.

#### Tweed Coast Road / Cudgen Road Intersection

Niche (2018b) was also commissioned to prepare a Statement of Heritage Impact (SoHI) to assess the proposed intersection upgrade works at the Tweed Coast Road/ Cudgen Road intersection (attached as Appendix 1 to this letter). The SoHI was deemed necessary due to an adjacent locally listed heritage item - the Cudgen Sugar Mill Remains', an archaeological site listed as an item of local significance within Schedule 5 of the TLEP 2014.

The SoHI presented the results of background heritage register searches, historical research, a site inspection, and significance and impact assessments. It was prepared in accordance with the Statements of Heritage Impact guidelines published by the NSW Heritage Office and Department of Urban Affairs & Planning (1996, revised 2002), originally published as part of the NSW Heritage Manual.

It was shown that 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 archaeological 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 proposed works would occur within part of Lot 2 DP828298, which forms the LEP listing for the Cudgen Sugar Mill Remains. However, the SoHI noted that the subject area had been heavily modified in the recent past as evidenced by the presence of a large drainage culvert that runs form the northeast corner to the southwest, 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 were not clear from available documentation. The TLEP 2014 listing indicated 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 works. Based on the results of the desktop review of the history of the subject area, and the visual inspection, the potential for the subject area to contain archaeological evidence (relics or works) associated with the former Cudgen Sugar Mill operations and tramway was considered to be low.

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 items. No additional assessment is required unless later design changes would result in works within the curtilage of the heritage item.



#### References

Niche (2018a) *Tweed Valley Hospital Historical Heritage Assessment*, unpublished report prepared for NSW Health Infrastructure.

Niche (2018b) *Tweed Coast Road and Cudgen Road Intersection Upgrade Statement of Heritage Impact,* unpublished report prepared for TSA Management.

Yours sincerely,

Cameron Harvey

Niche Environment and Heritage

C. Harry

Appendix 1: Tweed Coast Road and Cudgen Road Intersection Upgrade Statement of Heritage Impact





# Tweed Coast Road and Cudgen Road Intersection Upgrade

**Statement of Heritage Impact** 

Prepared for TSA Management
17 January 2019

**Document control** 

Project no.: 4639

Project client: TSA Management

Project office: Brisbane

Project Director: Cameron Harvey

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Authors: Jess Cuskelly

Internal review: Dr Kevin Rains, Cameron Harvey

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Local Government Area: Tweed

#### **Document revision status**

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Armidale

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Cover photograph: View looking south across the subject area (Source: Niche 2018).



## **Executive Summary**

This report presents the results of a heritage impact assessment for the proposed intersection upgrades at the corner of Tweed Coast Road and Cudgen Road, Cudgen, NSW. The intersection upgrades would take place immediately adjacent to the locally significant 'Cudgen Sugar Mill Remains' (Tweed LEP 2014 #A2), an archaeological site listed as an item of local significance within Schedule 5 of the *Tweed Local Environmental Plan 2010*.

The report 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 & Planning (1996, revised 2002), originally published as part of the NSW *Heritage Manual*.

The proposed works involve a new left turn lane for the north approach along Tweed Coast Road. As a result, the footpath along Cudgen Road (east approaching) would be widened to accommodate the new left turn lane. The widening of the road will extend within the existing road reserve. The intersection upgrade includes lane discipline and sign changes.

The assessment concludes that the upgrades will not impact on the significance of the adjacent heritage items. No additional assessment is required unless later design changes would result in works within the curtilage of the heritage item.



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#### 1. Introduction

#### 1.1 Background

Niche Environment and Heritage Pty Ltd (Niche) was commissioned by TSA Management on behalf of NSW Health Infrastructure to prepare this Statement of Heritage Impact (SOHI) for the proposed intersection upgrade prior to commencement of works at Tweed Coast Road and Cudgen Road, Cudgen, NSW (the 'subject area'). This SOHI is required as the subject area is located adjacent to the Cudgen Sugar Mill Remains (LEP ID# A2) an archaeological item listed under Schedule 5 Part 3 of the *Tweed Local Environmental Plan 2014*.

The main aim of this assessment is to review documentary and physical evidence in order to assess the impacts of the intersection upgrades on the heritage values of the Cudgen Sugar Mill Remains. The design methods for the proposed intersection upgrade were provided by TSA Management and have been assessed in accordance with the *Statements of Heritage Impact* guidelines published by the NSW Heritage Office and Department of Urban Affairs & Planning (1996, revised 2002), originally published as part of the NSW *Heritage Manual*.

#### 1.2 Location

The subject area is bounded by Tweed Coast Road and Cudgen Road intersection at Cudgen, NSW. Cudgen is approximately 103 km south of Brisbane within the boundaries of the Tweed Shire Council LGA. The location of the subject area is shown in Figure 1.

#### 1.3 Proposed development

The proposed intersection upgrades were developed to improve the lane signage along Tweed Coast and Cudgen Road. Part of the development includes the widening of the left lane turn onto Cudgen Road (east approach) and extending the footpath into the road reserve. Additionally the proposed works include lane discipline changes for the north and east approaches and signal phasing change.

#### 1.4 Scope

This assessment has been prepared with reference to the Statements of Heritage Impact guidelines published by the NSW Heritage Office and Department of Urban Affairs & Planning (1996, revised 2002). The scope involved completing the following tasks:

- A desktop review of heritage register listings and other historical information relevant to the subject site and surrounding Tweed Shire .
- Limited historical research (secondary sources only) to understand the past land use and heritage values of the subject area and surrounds.
- Visual inspection of the subject area to understand the archaeological values identified by the LEP listing and to understand impacts, and
- Impact assessment and preparation of management recommendations to mitigate identified impacts of the proposed development the heritage item.

#### 1.5 Report outline

The following report is divided into the following sections:

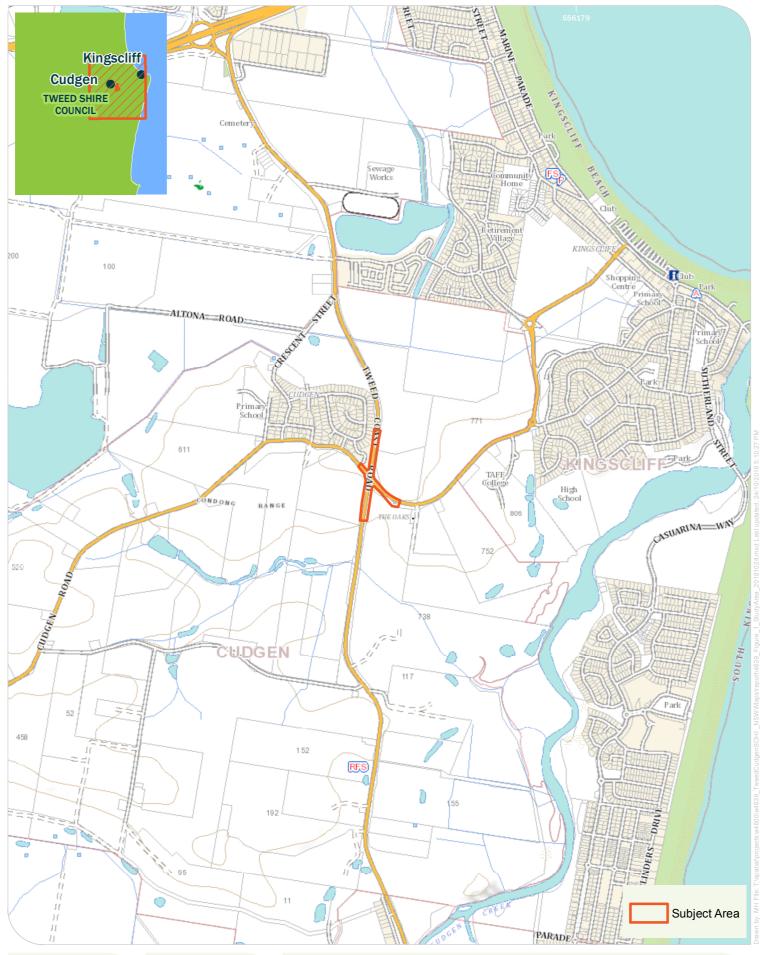
- A summary of relevant legislation and register searches (Section 2)
- A historical context for the local area and subject area (Section 3)



- A description of the subject area, including setting (Section 4)
- Assessment of significance (Section 5)
- Statement of heritage impact (Section 6)

## 1.6 Authorship and acknowledgements

This report was written by Jess Cuskelly (Heritage Consultant, Niche) with assistance and review by Kevin Rains and Cameron Harvey (Heritage Consultant, Niche).







Location Map
Tweed Coast Road and Cudgen Road Intersection

Niche PM: Cameron Harvey Niche Proj. #: 4639 Client: TSA Management

Figure 1



## 2. Regulatory and assessment framework

The following subsections present a summary of relevant Commonwealth and State legislation, local planning instruments designed to conserve significant heritage items and their values.

#### 2.1 State legislation

#### 2.1.1 Heritage Act 1977

The *Heritage Act 1977* is a statutory tool designed to conserve environmental heritage in NSW. It is used to regulate development impacts on the State's historical heritage assets. The Act defines a heritage item as "a place, building, work, relic, moveable object or precinct". Items that are assessed as having State heritage significance can be listed on the NSW State Heritage Register (SHR). Proposals to alter, damage, move or destroy heritage items listed on the SHR (or protected by an Interim Heritage Order [IHO]), require an approval under s60 of the *Heritage Act 1977*.

Archaeological features and deposits are afforded statutory protection by the 'relics provisions' of the Act. A relic is defined as "any deposit, artefact, object or material evidence that relates to the settlement of the area that comprises NSW, not being Aboriginal settlement, and is of State or local heritage significance". Land disturbance or excavation that will, or is likely to, result in a relic being discovered, exposed, moved, damaged or destroyed is prohibited under the provisions of the Act, unless carried out in accordance with a permit issued under s140 or s139 of the Act.

#### 2.1.2 Relics provisions

Archaeological features and deposits are also afforded statutory protection by the relics provisions of the Heritage Act. Section 139[1] states that:

A person must not disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed unless the disturbance or excavation is carried out in accordance with an excavation permit.

#### No items were listed on the NSW State Heritage Register.

#### 2.1.3 State Heritage and Conservation (s170) Registers

Under s170 of the *Heritage Act 1977*, NSW government agencies are required to maintain a register of heritage assets under their control or ownership. Each government agency is responsible for ensuring that the items entered on its register under s.170 are maintained with due diligence in accordance with State Owned Heritage Management Principles. Items listed on s170 Heritage and Conservation Registers are listed on the State Heritage Inventory (SHI).

#### No items were listed on the NSW State Heritage Register.

#### 2.2 Local government planning instruments

Each Local Government Area (LGA) is required to create and maintain a LEP that identifies and conserves Aboriginal objects and historical heritage items. These items are protected under the EP&A Act. Heritage items within each LGA are listed in Schedule 5 and are subject to the planning controls and provisions set out in Clause 5.10 (Heritage Conservation) of an LEP.



#### 2.2.1 Tweed Local Environmental Plan 2014

Each Local Government Area is required to create and maintain a Local Environmental Plan (LEP) that identifies and conserves Aboriginal and historical heritage items. These items are protected under the EP&A Act. As outlined in Clause 5.10 of the Tweed LEP, Council may require a heritage assessment to be prepared if the development is "on land that is in the vicinity of land on which a heritage item is located". The heritage assessment must "assess the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned". This report aims to satisfy this clause.

Cudgen Sugar Mill Remains (A2) listed within Tweed LEP 2014 Part 3 Archaeological sites (Figure 2).







Nearby heritage items Tweed Coast Road and Cudgen Road Intersection

Niche PM: Cameron Harvey Niche Proj. #: 4639 Client: TSA Management

Figure 2



#### 3. Historical context

#### 3.1 Preamble

The following historical summary is largely reproduced from material contained in the following:

- Office of Environment and Heritage. (2004). Cudgen Sugar Mill Remains. [Online]
   <a href="https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2520435">https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=2520435</a>
- Boileau, J. (2004) Community Based Heritage Study: Thematic History. Report for Tweed Shire Council.

#### 3.2 Early colonial history

It was not until 1823 that John Oxley, commissioned by Governor Brisbane to locate a suitable site for a new penal settlement (Boileau 2004), discovered the Tweed River. The first European settlement in the Tweed Valley was a cedar getters camp established in 1843 at Taranora (today known as Terranora) (Boileau 2004).

As the supply of easily won cedar on the Tweed River dwindled in the 1860s, and the costs of obtaining and shipping it multiplied, settlers turned to farming the rich alluvial soil as an alternative source of income. After experimentation with a variety of crops including coffee, tobacco, cotton, millet and opium, sugar was the most suitable crop (Boileau 2004).

Two early settlers in the district, Joshua Bray at Kynnumboon near the present town of Murwillumbah and Michael Guilfoyle at Cudgen carried the first experiments in growing sugar cane in the Tweed Valley around 1869. The diaries of Joshua Bray and Samuel Gray, recorded that they planted sugar cane as early as 1865 (Boileau 2004).

Michael Guilfoyle took up 600 acres at Cudgen in 1869 to establish a sugar plantation and tropical nursery. He and his son William brought with them forty-one varieties of sugar cane and a rare collection of tropical plants. William Guilfoyle was a skilled botanist and in 1873, he left the district and eventually became Director of the Botanic Gardens in Melbourne. The house that he and his brother built at Cudgen no longer exists, but is described as being 'built of fine timbers growing on the plantation such as cedar, teak, rosewood and beech'. 'The orchard and gardens were some of the finest in Australia and contained some of the rarest plants to be found anywhere' (Boileau 2004:104).

During the early 1870s individual farmers including Henry Scammel at Bilambil and Robert Cazala at Cudgen built small mills on their properties and manufactured sugar with varying degrees of success (Boileau 2004:104). Henry Skinner operated a mill at 'Inglewood' near Tumbulgum between 1875 and 1885. The early mills were primitive operated by hand rollers and after the juice was crushed from the cane, it was boiled over an open fire (Boileau 2004:104).

#### 3.3 Early Sugar Cane Farming

Successful sugar cane farming requires expensive machinery to crush and refine it, and to obtain the best sugar yields the cane be crushed within a short period of harvesting. Michael Guilfoyle found it difficult to raise enough money to produce cane in commercial quantities and build a mill to process it. When William Julius at Cudgen built the sugar mill after 1875, Guilfoyle was able to crush the cane (Boileau 2004).

In 1872 sugar growers on the Tweed, were dissatisfied with the production of the small mills, and saw the need for a large scale milling operation. They made approaches to the Colonial Sugar Refining Company (CSR) to build a mill on the Tweed River. CSR was experiencing problems with its mills on the Clarence and



Macleay Rivers. They sent two officers, E.N. Stephens and E.W. Hayley, to assess the prospects for a mill (Boileau 2004). It was decided that a mill at Condong be built.

#### 3.4 Cudgen Sugar Mill

William Julius was an important figure in the sugar industry in the Tweed Valley as an independent producer. Julius had considerable experience growing sugar cane in the West Indies, but his first ventures on the Macleay River failed due to frosts and floods. In 1869, Julius moved to the Tweed Valley and took up large areas of land at Cudgen. He planted sugar cane and built a mill to process it (Boileau 2004).

Mr W W Julius started construction of the sugar mill at Cudgen in 1869, but it was several years before milling operations began. After some years, Julius took in partners John Robb, snr, head of a Melbourne construction firm, and J J Casey, a Melbourne judge. Julius stayed on for a few years as manager, then sold his share and went to Western Australia. It appears that John Robb, jnr, and his brother, Arthur, came to Cudgen in c. 1888 and between them and the Mill Company owned a great portion of the land at Cudgen and Duranbah. At the mill, during the time of Robb & Co, a store, barracks, manager's homes, stables etc were built. In 1893, Robb applied for, and was granted, a lease to run a tramway from the mill to Chinderah, to take the milled sugar to the river for shipment to Sydney. He also laid tramlines around the farms for collection of the cut cane. There was approximately 11 miles of tram track through the plantation and to the Chinderah Wharf (OEH 2004).

John Robb snr died in 1895, after being declared bankrupt and penniless in 1893. It is not known how the mill and land were retained, assumably the deeds were transferred to John jnr prior to bankruptcy. The company of Robb and Co traded until the death of John Robb, jnr, in 1911. His brother, Arthur, negotiated the sale of the mill and lands with the CSR and it was taken over in 1912 (OEH 2004).

Most of the workers on Julius' plantation and mill were South Sea Islanders or 'Kanakas', who had been lured from their islands by the infamous 'blackbirders' as indentured labourers on the sugar cane plantations of north Queensland. Sugar cane production was both capital and labour intensive and a large cheap, unskilled labour force was needed as the industry developed in northern NSW in the 1870s. The critical need was for labour to clear and drain the land and grow and harvest the sugar crops (Boileau 2004).

Julius brought about 200 Islanders who had completed their contracts from Queensland and got them to completely clear and grub the land. All the stones they removed were used to build stone walls. Some of the stone walls built by the Islanders can still be seen today, bordering the red soil fields in the Cudgen area. Julius then leased out the land in lots of around 10 acres to Islanders to grow sugar, which was processed in the mill by other Islanders (Boileau 2004).

In 1892 Julius sold his plantation and mill to a Victorian firm, John Robb and Co. John Robb, born in Northern Ireland, was an entrepreneur who arrived in Victoria during the 1850s when the gold rushes were at their height, and was later involved in railway construction in Tasmania, South Australia and Queensland. In his Cudgen venture he was in partnership with a Victorian Judge, J.J. Casey. Robb laid narrow gauge train lines through the Cudgen cane fields and employed over 300 men to harvest cane and work at the mill (Figure 3: Train lines c. 1976 (Source: Boileau 2004)). The mill operated until 1911, when Robb died. The CSR bought the plantation and closed the mill. From then on the cane was taken to Chinderah (known as Cudgen Wharf) and transported by punt to the CSR Mill at Condong (Boileau 2004).



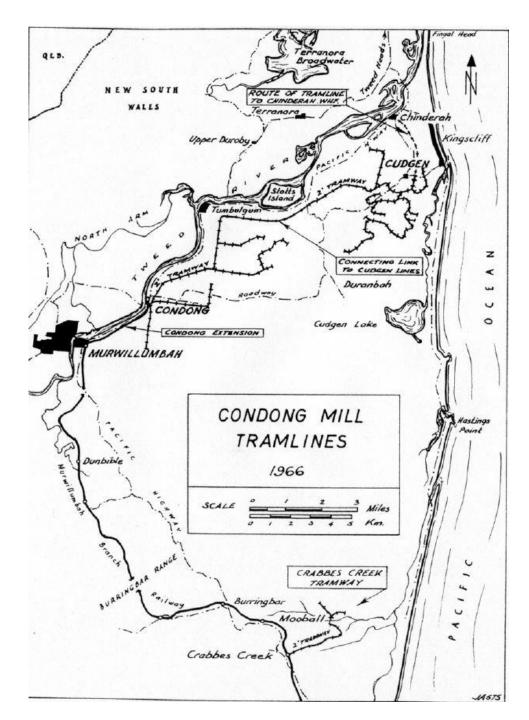


Figure 3: Train lines c. 1976 (Source: Boileau 2004)

Following the takeover by the CSR, the land was cut into small blocks of approximately 50 acres, and sold, but most of the mill buildings and stack were retained as storage sheds for many years. It is believed one of the storage sheds was transported to the Condong mill and it still survives in 2004. The tramline was also retained and used to transport the cut cane to the wharf at Chinderah for transport to the mill at Condong by barge. This mode of transport ceased c. 1965, being superseded by road transport (OEH 2004)

The chimney stack, reputedly the highest sugar mill stack in Australia and one of the oldest, was constructed of 70,000 imported ironstone bricks (Plate 1. Old sugar mill at Cudgen built by William Julius around 1880. Photo taken c. 1950 (Source: Boileau 2004).). It was demolished in 1962, following a lightning strike, which dislodged a few bricks, making the stack very unstable. The mill buildings had been dismantled several years prior to the demolition of the chimney (OEH).



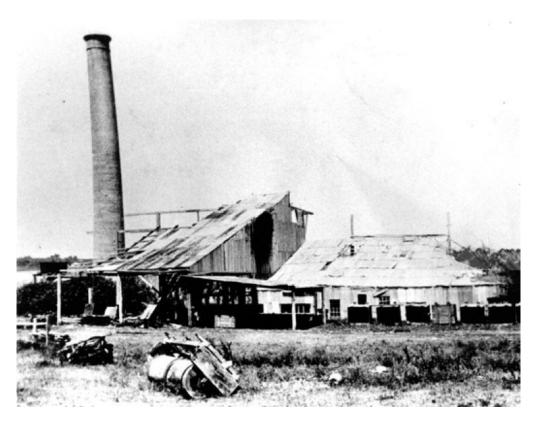


Plate 1. Old sugar mill at Cudgen built by William Julius around 1880. Photo taken c. 1950 (Source: Boileau 2004).



Plate 2. Concrete rubble, remains of the Cudgen Sugar Mill (Source: OEH, 2004).

#### 3.5 Land ownership history

Samuel William Gray took up the original Deed of Grant for the subject area, under the Crown Lands Alienation Act of 1861, in 1870 (Deed of Grant Vol.563 Folio 7). Gray was a grazier from the Kiama area (Certificate of Title Vol. 576 Folio 118). The subject area was original part of a 320 acre block divided by a 100 ft wide road reserve that went east to west. In the 1882 the land was subdivided into two large lots – a 205 acre block in the west and a 114 acres block in the east. Both were transferred to William Julius (Certificate of Title Vol.576 Fol.118) – who built the nearby Cudgen Sugar Mill. The subject area was in the eastern 114 acre block adjacent to the designed road reserve. Julius took out a mortgage from the Commerical Bank of NSW that year by soon transferred the title in 1883 to tenants in common John Robb, James Joseph Casey and Arthur Thomas Robb. Casey sold his share back to Julius in 1885



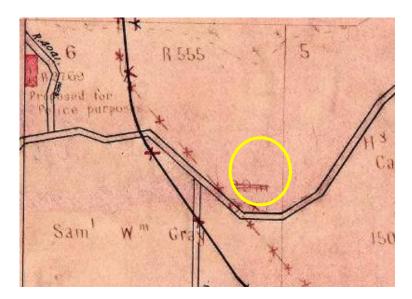


Figure 4. Extract c1890 Parish of Cudgen map showing subject area.

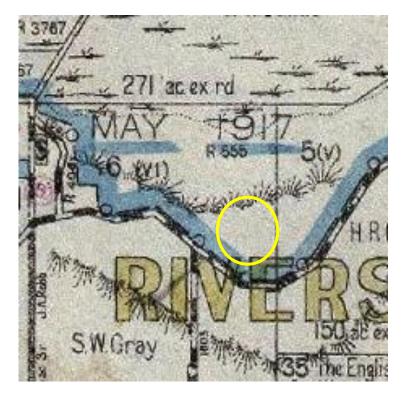


Figure 5. 1920 Parish of Cudgen map showing subject area.

Between the 1890s and early 20<sup>th</sup> century, several changes of title occurred including lease arrangements for parts of the lands still owned by Robb and Co. In 1916, The Colonial Sugar Refining Company acquired the 114 acres block including the subject area (Certificate of Title Vol.2655 Folio 31). No specific improvements to the subject area are shown though the adjacent road is considered in use. An undated cadastral map from Kingscliff (X-5467-41; presumably mid-20<sup>th</sup> century due to nearby subdivisions in Cudgen and creation of road reserve for the future Tweed Coast Road) shows the subject area (Lot 3/DP828298) including the alignment of a former cane tramway along the northeast boundary line.



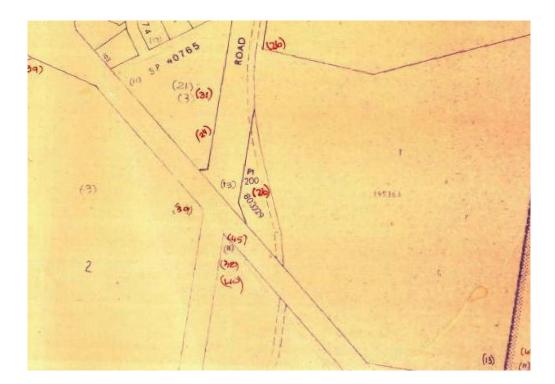


Figure 6. Kingscliff cadastral map X5467-41 showing subject area and tramway alignment.

Following closure of the Cudgen Mill in 1911, many of the lands in the area were sold off to CSR or turned into smaller lots. The subject area is marked on the Cudgen Cane Lands map as part of a 73 acre allotment including marked tramway adjacent to several small improvements (structure) along the western boundary with the now Tweed Coast Road corridor.

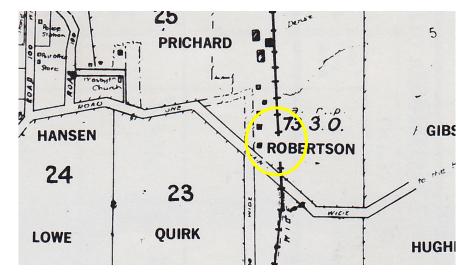


Figure 7. Undated map of cane properties around Cudgen, showing subject area.



## 4. Description

#### 4.1 Site description

The subject area includes that part of Lot 2 DP828298 is on the northeast corner of the Tweed Coast Road and Cudgen Road intersection, east of the small town of Cudgen and west of Kingscliff on the coast. The subject area is a small but roughly triangular shaped block of land measuring  $206m^2$  in area (Plate 3). The northeast boundary of the site is unfenced though delineated by a row of palm trees planted at evenly spaced intervals from the Cudgen Road boundary to the Tweed Coast Road boundary. A drainage channel has been created, including a concrete culvert, which runs alongside the palm-tree lined boundary for the length of the lot (Plate 4). This channel is heavily grassed though small exposed areas indicate the channel is partially retained by a thin concrete surface.

The southwest corner closest to the intersection is at a reduced height of 1.2m below the adjacent road and footpath level (Plate 5). The land between the road boundary and the drainage channel is relatively level though slopes up towards both road margins. The lot is predominantly grassed with the exception of two driveway areas and a concrete slab (see below). Ground surface visibility within the grassed areas was very low, with approximately 95% grass coverage. Small exposures of the underlying soils indicate the presence of sandy soils with small stone inclusions of numerous types, suggesting the presence of introduced gravel across the subject area (Plate 6).

The Tweed Coast Road boundary includes a small section of bitumen driveway. The Cudgen Road boundary also includes a concrete drive on the curb and a raised sloped gravel drive that provided a driveway into the lot. The Cudgen Road boundary is partially fenced with treated pine post and rail sections, and one section of steel post and chain link fencing.

The Cudgen Road boundary is partly reinforced with a cement "besser" block wall. This block wall measures 1.2m in height. Immediately adjacent to the block wall is a concrete floor surface measuring 20m x 15m and two short sections of besser block wall perpendicular to the road. Along the base of the retaining wall is a shallow concrete spoon drain. The adjacent slab is broken into smaller sections that appear to be additions made to the slab area over time (Plate 7).

#### 4.2 Archaeological potential

The subject area is recognised on the local LEP as being an item with archaeological values, associated with the former Cudgen Sugar Mill operations to the north. Specific information about the values of the site are not available in the LEP listing, on NSW Heritage Online, or in the Community Based Heritage Study (Boileu 2004). Based on the information available for this SOHI, this lot was once part of lands in the area owned by the Colonial Sugar Refining Company and then later as part of small farm operations which took place following closure of the Cudgen Mill. Few historical documents indicate the presence of improvements during the early 20<sup>th</sup> century, except:

- The tramway alignment which is marked as following the northeast boundary of the subject area,
   and
- Small structures along the western boundary of the subject area which were present post-mill
  operations and during the later small farm era of the early to mid-20<sup>th</sup> century.

There is little visible evidence of the mill today. The subject area includes evidence of significant ground disturbance in the past. This includes creation of the drainage channel and culvert and planting of the row of palm trees along the northeast boundary. It appears that the ground surface have been reduced or cut



down below the adjacent Cudgen Road level by over 1m. This was presumably done to create a more level block of land for the installation of a concrete slab and structure close to the Cudgen Road boundary. The presence of gravel and yellow sandy soils inconsistent with the red soils of adjacent farms indicates the subject area may have been further reduced in level and therefore further altered through deposition of a substantial amount of modern fill across the site.



Plate 3. View looking northwest across the subject area. Note culvert (foreground), Cudgen Road (left), Tweed Coast Road (far distance) and palm tree lined boundary (right).



Plate 4. Drainage channel and palm tree boundary, looking north towards Tweed Coast Road.





Plate 5. Concrete slab and block retaining wall along Cudgen Road boundary, looking east.



Plate 6. Example of light sandy soils and stone (gravel) inclusions on exposed area within subject area.





Plate 7. Concrete slab, looking north towards Tweed Coast Road.

This past disturbance has most likely had a substantial impact on the archaeological record within the subject area. The ground surface levels of the subject area have been substantially reduced (at least 1.2m but likely more) in the past particularly in the southwest corner of the lot closest to the Tweed Coast and Cudgen Road intersection. Any physical evidence of the small structures noted in early 20<sup>th</sup> century maps close to this intersection (Figure 7) are likely to have been destroyed during ground lowering works and due to the proximity of Tweed Coast Road, by past road construction works.

The construction of a drainage channel along the northeast boundary has also impacted on potential for any subsurface archaeological materials and possible remnants of the former tramway. It is noted that the palm trees are planted on slightly elevated soils along this boundary. It is possible the trees were planted along what was a raised section of tramway alignment. However, visual inspection of the areas across Cudgen Road to the south and immediately north of the subject area did not indicate the presence of an elevated tramway in this area.

The only possible heritage items that remain within the subject area are the concrete slab and block retaining wall along the Cudgen Road boundary. No documentary evidence exists to positively identify the origins of these items but the use of concrete for a slab and the presence of besser blocks for wall construction suggest a mid-late 20<sup>th</sup> century origin rather than during the sugar era.

Based on the results of the desktop review of the history of the subject area, and the visual inspection, the potential for the subject area to contain archaeological evidence (relics or works) associated with the former Cudgen Sugar Mill operations and tramway are considered to be low.



## 5. Assessment of significance

#### 5.3 Significance framework

The NSW Heritage Manual guideline, 'Assessing Heritage Significance' (NSW Heritage Office 2001) provides the framework for the following significance assessment and Statement of Significance. These guidelines incorporate the seven aspects of cultural heritage value identified in the Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter, 2013 (Burra Charter) into a framework currently accepted by the NSW Heritage Council.

#### 5.4 Significance assessment Criteria of the Cudgen Sugar Mill Remains (A2)

Following the results of the historical research into the evolution of the subject area, and a review of the conservation areas characteristics, the following significance assessment has been prepared.

Table 1. Significance assessment of the subject area

Criterion	Significance
(a) An item is important in the course, or pattern, or NSW's cultural or natural history (or the cultural or natural history of the local area)	The Cudgen Sugar Mill was the first large sugar mill built in the Tweed district and the only one in NSW built by the farmer, W W Julius, for his own sugar crop. The chimney stack, reputedly the highest sugar mill stack in Australia and one of the oldest, was constructed of 70,000 imported ironstone bricks.  Any relics associated with the old Cudgen Sugar Mill would have local heritage significance under this criterion.
(c) An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievements in NSW (or the local area)	The site has archaeological value.

#### 5.5 Statement of Significance

The sugar mill on this site (Cudgen Sugar Mill archaeological remains) was unique in NSW in that it was the only fully developed "plantation" mill using Islander labour, with barracks, recreational facilities, hotel, churches, etc. The site has archaeological value within its landscape (OEH, 2004). The Cudgen Sugar Mill was constructed in 1869 and was one of the oldest sugar mill stack in Australia. Its historical significance is enhanced by the industrial setting of the being the first large sugar mill built in the Tweed district.



## 6. Proposed works

#### 6.1 Preamble

The following subsections provide a more detailed description of the proposed works and assesses the potential impacts of the works on the heritage significance of the Cudgen Sugar Mill remains.

#### 6.2 Proposed works

The proposed works involve the upgrade of the Tweed Coast Road and Cudgen Road intersection (See Annex 1 – Concept prepared by Bitzios Consulting 10/10/18). This will involve a new left turn lane for the north approach along Tweed Coast Road. The associated road widening of the left turn lane will be extended into the existing road reserve, approximately 100 meters. To accommodate the new left turn lane the existing footpath may be widened within the road reserve to accommodate the road widening. An extension of a short northbound kerbside exit lane for Tweed Coast Road has been proposed.

The intersection upgrade includes lane discipline changes for the north and east approaches. The north approach will include two central lanes ('through only') and right and left lane turn. Other than lane discipline changes for the east approach the lane is to remain as existing. No changes to the south approach will occur.

The proposed works intent to reduce western leg departure to single lane by providing a chevron line marking in the median lane. Additionally, signal phasing change with the provision of the southbound left turn lane and lane discipline changes and southbound left turn to overlap with eastbound right turn (see Annex 1).



## 7. Heritage impact assessment

#### 7.3 Assessment of impacts

The following subsections assess potential impacts of the proposed works on the heritage significance of the Cudgen Sugar Mill remains.

The 'Statements of Heritage Impact' guidelines (NSW Heritage Office and Department of Urban Affairs & Planning (1996, revised 2002) pose a range of questions for consideration when assessing impacts for various types of development, including remediation works, which are addressed in Table 2.

Table 2: Impact assessment considerations for the proposed intersection upgrades.

How is the impact of the development on the heritage significance of the item to be minimised?	The proposed development does not encroach on the curtilage of the heritage item. The concept design indicates impacts will occur within the adjacent road reserve.
Why is the new development required to be adjacent to a heritage item?	The proposed development is for an upgrade to an existing road that is directly adjacent to the heritage item. These upgrades include a new left turn lane on Tweed Coast Road (north approach) and the potential footpath widening on Cudgen Road (east approach).
How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?	The proposed development will occur adjacent to the heritage item. The results of this assessment indicate that it is unlikely that any archaeological evidence of the former Cudgen Sugar Mill are located within this section of the LEP listing. The proposed works will therefore not impact on the significance of the adjacent heritage item.
How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects?	The proposed works are not visually dominating. The concept design indicates the impacts along the Cudgen Road boundary of the heritage item to be limited to footpath upgrades. This would not have a detrimental impact on the significance of the adjacent heritage item.
Is the development sited on any known, or potentially significant archaeological deposits? If so, have alternative sites been considered? Why were they rejected?	The road reserve adjacent to the heritage item along Tweed Coast Road and Cudgen Road has a low potential of artefacts associated with the heritage item, as the area has been highly modified.  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.
Is the new development sympathetic to the heritage item? In what way (e.g. form, siting, proportions, design)?	Yes. The proposed intersection upgrade does not physically impact the heritage item or its curtilage.



Will the additions visually dominate the heritage item? How has this been minimised?	As the heritage item is an archaeological item, the proposed work will not visually dominate the item.
Will the public, and users of the item, still be able to view and appreciate its significance?	Yes. The proposed development does not impact on the views to the heritage item.



#### 8. Conclusion and recommendations

#### 8.1 Conclusion

The proposed works will take place directly adjacent to the 'Cudgen Sugar Mill Remains', a site with recognised archaeological values and listed in the Tweed Shire (LEP ID#A2) 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 this results of this assessment, the subject area has been heavily modified in the recent past as evidenced by the presence of a large drainage culvert that runs form the northeast corner to the southwest, fill now covering over much of the subject area, and evidence that the land surface has been substantially lowers 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 LEP 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 project.

This assessment concludes that the proposed works would have no direct physical impact on the archaeological values of the Cudgen Sugar Mill Remains

#### 8.2 Recommendations

On the basis of the results of this heritage impact assessment as per the design information provided to date, the following items are recommended:

- No additional cultural heritage assessment is necessary.
- If the intersection design changes to include and works within the curtilage of the heritage item, a revised SOHI will need to be prepared to address possible impacts.



#### 9. References

#### **Secondary Sources**

Boileau, Joanna. (2004). *Community Based Heritage Study Thematic History*. Report prepared for Tweed Shire Council.

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Heritage Office and Department of Urban Affairs & Planning (2002). Statements of Heritage Impact. Available online at <a href="http://www.environment.nsw.gov.au/heritage/publications/#S-U">http://www.environment.nsw.gov.au/heritage/publications/#S-U</a>

Tweed Local Environmental Plan 2014.

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#### **Primary sources**

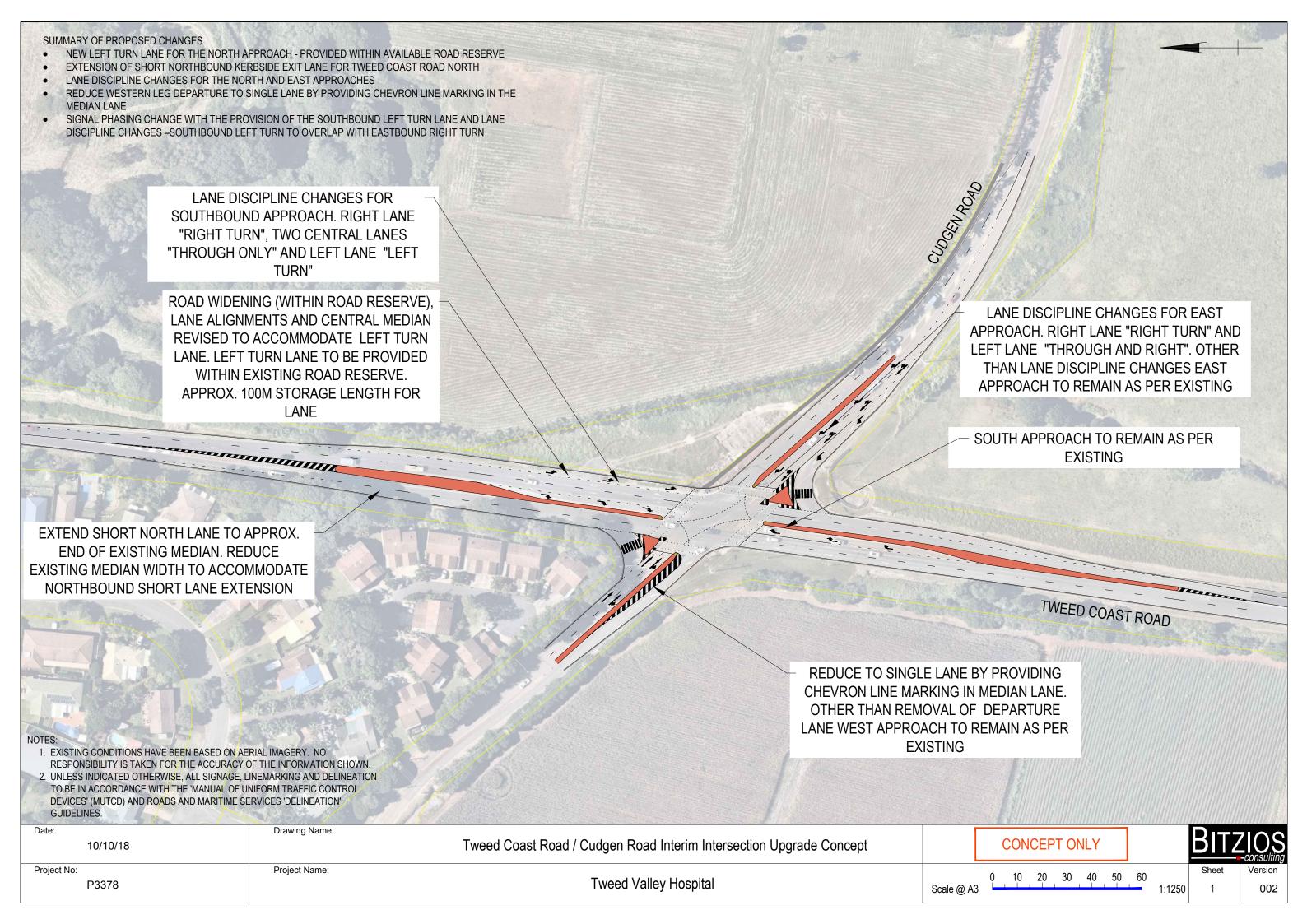
*Parish of Cudgen,* LTO Charting Map, dated 1920 Edition 8 (available online from the Department of Land & Property Information at <a href="http://images.maps.nsw.gov.au/pixel.htm">http://images.maps.nsw.gov.au/pixel.htm</a>).

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Parish of Cudgen, LTO Charting Map, dated c.1890 Edition2 (available online from the Department of Land & Property Information at <a href="http://images.maps.nsw.gov.au/pixel.htm">http://images.maps.nsw.gov.au/pixel.htm</a>).



## **Annex 1 – Plans and elevations**





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