

Scoping Report.

REQUEST FOR SECRETARY'S ENVIRONMENTAL
ASSESSMENT REQUIREMENTS

HANSON TWEED SAND PLANT EXPANSION

PREPARED FOR
Hanson Construction Materials Pty Ltd

OCTOBER 2019

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Scoping Report

Hanson Tweed Sand Plant Expansion Phase 5 to 11 (TBC)

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0.0 Contents

0.0 Contents.....	3
1.0 Executive summary.....	6
2.0 Proponent details.....	7
2.1 Proponent Particulars.....	7
2.2 Scoping Project Team / Report Author	7
3.0 Project details.....	7
3.1 Project Title.....	7
3.2 Expected Capital Investment Value.....	7
3.3 General Project Description.....	8
3.3.1 Extraction Phasing.....	8
3.3.2 Access.....	9
3.3.3 End Use.....	9
3.3.4 Staff.....	9
3.3.5 Material Import.....	9
3.3.6 Interim Agricultural Use / Agistment	10
3.3.7 Overburden.....	10
3.3.8 Lighting.....	10
3.3.9 Onsite Waste Management.....	10
3.3.10 Machinery Servicing.....	10
3.4 Rationale for the project and why it is important.....	10
3.5 Relationship to other major projects and/or developments.....	11
3.5.1 Existing HTSP (Phases 1 to 4).....	11
3.5.2 Cudgen Lakes Sand Operation.....	12
3.5.3 Australia Bay Lobster Producers Facility	14
3.5.4 Other Major Projects	14
3.6 Construction Activities.....	15
3.7 Decommissioning Activities	15
4.0 Site details	16
4.1 Legal Description, Ownership & Size	16
4.1.1 Unnamed Road Reserve.....	17
4.2 Regional & Local Context	18
4.3 Topography.....	19
4.4 Cane Drains.....	19
4.5 Services	20
4.6 Environmental setting (Sensitive Receivers).....	21
5.0 Strategic and statutory context	23
5.1 State Significant Development Criteria.....	23
5.2 North Coast Regional Plan 2036	23
5.3 Tweed Local Environmental Plan 2014.....	24
5.4 State Environmental Planning Policies	29
5.4.1 State Environmental Planning Policy No.33 – Hazardous and Offensive Development.....	29
5.4.2 State Environmental Planning Policy No.55 – Remediation of Land	29
5.4.3 State Environmental Planning Policy (Coastal Management) 2018	29
5.4.4 State Environmental Planning Policy (Infrastructure) 2007.....	30
5.4.5 State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007	30
5.4.6 State Environmental Planning Policy (Primary Production and Rural Development) 2019.....	34

5.4.7 State Environmental Planning Policy (State and Regional Development) 2011.....	35
5.5 Designated Development	36
5.6 Other approvals and licences.....	36
6.0 Consultation.....	38
6.1 Scoping Consultation.....	38
6.2 Project Consultation.....	38
7.0 Key & Other Issues for Inclusion in EIS	38
7.1 Key Issues	39
7.1.1 Acoustics	39
7.1.2 Visual.....	39
7.1.3 Light Spill.....	39
7.1.4 Road and Rail Network	39
7.1.5 Services & Facilities.....	40
7.1.6 Soil Chemistry (ASS)	40
7.1.7 Capability (Agricultural)	41
7.1.8 Contamination	42
7.1.9 Water Quality	42
7.1.10 Water Availability.....	43
7.1.11 Hydrological Flows.....	43
7.1.12 Flood Waters	43
7.2 Other Issues	45
7.2.1 Particulate Matter	45
7.2.2 Ownership	45
7.3 Scoping Only	45
7.3.1 Access to Property.....	45
7.3.2 Utilities	45
7.3.3 Public Infrastructure	45
7.3.4 Aboriginal Cultural Heritage.....	46
7.3.5 Opportunity Cost	46
7.3.6 Atmospheric emissions	47
7.3.7 Native vegetation	47
7.3.8 Native Fauna.....	48
7.3.9 Bushfire.....	48
7.3.10 Stability and/or structure.....	49
Table 1: Proponent Particulars	7
Table 2: SEQ and NSW growth in fine sand between 2013 and 2016.....	10
Table 3: SEQ and NSW fine sand demand predictions 2016-2022.....	11
Table 4: Phase 1 to 4 approved hours of operation	12
Table 5: Approved Cudgen Lakes Sand Hours of operation	13
Table 6: Approved Cudgen Lakes Sand Noise Restrictions	14
Table 7: Proposed Construction Activity at each Phase	15
Table 8: Proposed Decommissioning Activity at each Phase.....	15
Table 9: Property Description, Owner/ Controlling Authority, and Lot Size	16
Table 10: Important Farmland Interim Variation Criteria (Source: North Coast Regional Plan 2036)	23
Table 11: Potential End Use Permissibility	27
Table 12: Approvals and Licenses required	36

Figure 1: Extraction Phases Concept Plan	8
Figure 2: Approved Cudgen Lakes Sand Operation	13
Figure 3: Lot layout and identification	17
Figure 4: Regional Context of the Subject land (Source: North Coast Regional Plan 2036)	18
Figure 5: Local context of the subject land	19
Figure 6: Indicative Location of Cane Drains on the subject land	20
Figure 7: Surrounding Sensitive Receivers Natural	21
<i>Figure 8: Surrounding Sensitive Receivers Dwellings</i>	22
Figure 9: Land Zoning of Subject Site (Source: Tweed Shire Council)	25
Figure 10: Strategic Agricultural Land (Source: NSW Planning Portal)	34
Figure 11: Acid Sulfate Soils Mapping (Source: TSC)	41
Figure 12: Agricultural Land Suitability (Source: Tweed Shire Council)	42
Figure 13: Farmland Protection Project (Source: Tweed Shire Council)	42
Figure 14: High Flow maps of the subject site (Source: Tweed Shire Council)	44
Figure 15: Tweed Aboriginal Cultural Heritage Management Plan 2018	46
Figure 16: Vegetation Management Plan 2009 (Source: Tweed Shire Council)	48
Figure 17: Mapped Bushfire Prone Land (Source: Tweed Shire Council)	49

Attachment 01: Concept Development / Phasing Plan
Attachment 02: End Use Concept Plan
Attachment 03: Zoning and Preliminary Analysis Plans
Attachment 04: Services Plans (DBYD)
Attachment 05: AHIMS Searches
Attachment 06: Lidar Contours
Attachment 07: Title Searches
Attachment 08: HTSP Phase 1-4 Approval
Attachment 09: DPIE Scoping Worksheet
Attachment 10: Scoping Consultation – DPIE
Attachment 11: Scoping Consultation – RMS
Attachment 12: Scoping Consultation – TSC
Attachment 13: Community Consultation Methodology & Scoping Report
Attachment 14: Visual Impact Assessment Methodology & Scoping Report
Attachment 15: Traffic Impact Assessment Methodology & Scoping Report
Attachment 16: Key Environmental Issues Methodology & Scoping Report

1.0 Executive summary

This Scoping Report has been prepared to accompany a request for the Secretary's Environmental Assessment Requirements (SEAR's) for the proposed expansion and redevelopment of the existing Hanson Tweed Sand Plant (HTSP). The existing HTSP is located at Cudgen NSW 2487 within the Tweed Local Government Area (TLGA). The project is known as 'Hanson Tweed Sand Plant Expansion Phase 5 to Phase 11 (TBC)'.

The proposed HTSP expansion would access an available sand resource of approximately 30-35 million tonnes and provide production and transport of a maximum 950,000 tonnes of sand per annum (market driven). The proposed project life is 30 years (market driven) spanning several extraction phases. The project would increase the current approved operating hours of the HTSP to allow operations 24 hours, seven days a week.

The end use of the extraction area would be a public access multi-use facility comprising a range of active and passive recreation and education opportunities to be further investigated through the project development and assessment process.

To achieve the maximum extraction rates the use of Altona Road and Tweed Coast Road as a haulage route will be abandoned. Connection to the Tweed Valley Way Pacific Highway Interchange for operational access and haulage would be provided in its place.

The project would involve the land identified as Lot 22 DP1082435, Lot 23 DP1077509, Lot 494 DP720450, Lot 1 DP1250570, Lot 2 DP1192506, Lot 51 DP1166990, Lot 3 DP1243752, Lot 50 DP1056966, Lot 51 DP1056966, Altona Road/Melaleuca Road Reserve, Pacific Hwy / Tweed Valley Way Interchange Road Reserve and an unnamed road reserve. Refer Attachment 03 for identification and location of the above land.

This scoping report has reviewed adjoining major project land uses, other major projects in the TLGA, and both the adjoining natural and residential sensitive receptors. Of note to the east of the project site is the existing Cudgen Lakes sand operation. While to the west of the project site is a commercial aquaculture operation known as the Australian Bay Lobster Producers (ABLP) facility.

The relevant Environmental Planning Instruments, Referrals, Licenses and other approvals that will be applicable to the project have been identified. In particular, the project would require additional approvals/licenses under the *Protection of the Environment Operations Act 1997*, *Roads Act 1993*, and *Water Management Act 2000*.

As part of the scoping assessment, initial consultation with Department of Planning, Industry and Environment (DPIE), NWS Roads and Maritime Services (RMS), Tweed Shire Council (TSC) and the NSW Environment Protection Agency (EPA) was undertaken. Initial comments from these authorities (where provided) have been included within the attachments of this report.

Finally, the DPIE State Significant Development (SSD) scoping worksheet has been completed and provided under Attachment 09. The key, other and scoping issues identified by the scoping worksheet have been discussed within Section 7 of this report. To support project scoping, a number of specialist scoping and methodology reports, and analysis/concept plans have been prepared and included within the attachments of this report.

2.0 Proponent details

2.1 Proponent Particulars

Table 1: Proponent Particulars

Name:	Hanson Construction Materials Pty Ltd
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ACN	009 679 734
Nominated Contact	Mr. Murray Graham Development Manager
Nominated Contact Details	Murray.graham@hanson.com.au Mob: 0417 641 012 Office: 07 3246 5554

2.2 Scoping Project Team / Report Author

This scoping report has been prepared by Lance Newley; Bachelor of Built Environment (URP), Queensland University of Technology. Specialty scoping input has been provided by the project team consisting of the following:

- Hanson Construction Materials;
- Burchills Engineering Solutions;
- Gilbert & Sutherland;
- Steve MacRae Development Services;
- Zone Landscape Architecture; and
- Zone Planning Group.

Issue specific scoping / methodology reports included within the attachments have been separately authored.

3.0 Project details

3.1 Project Title

Hanson Tweed Sand Plant Expansion Phase 5 to Phase 11 (TBC)

3.2 Expected Capital Investment Value

Capital Investment Value (CIV) of the project is anticipated to be between \$3 million and \$5 million. CIV will be refined as the project develops and future detailed studies and design completed.

3.3 General Project Description

The project is the expansion and redevelopment of the existing Hanson Tweed Sand Plant. The project would access an available sand resource of approximately 30–35 million tonnes and provide production and transport of a maximum 950,000 tonnes per annum (market driven). Project life would be 30 years (market driven) spanning several extraction phases.

The project would increase operating hours to 24 hours, seven days a week. To achieve the intended maximum extraction rates the use of Altona Road and Tweed Coast Road as a haulage route will be abandoned. Connection to the Tweed Valley Way Pacific Highway Interchange for operational access and haulage will be provided in its place. End use access would be maintained via Altona Road.

The project would initially utilise the existing wash plant and stockpile area currently located on the eastern boundary of Lot 22 DP1082435; as extraction phases progress, the wash plant and stockpile area would be relocated to match operational requirements and appropriately manage the project's interaction with nearby sensitive receptors. This position would be at the northern end of Lot 2 DP1192506.

The proposed end use of the extraction area would be a public access multi-use facility comprising a range of active and passive recreation and education opportunities. Rehabilitation and creation of 'habitat' will also occur. The creation and delivery of the end use would be staged as phases of extraction complete.

3.3.1 Extraction Phasing

The project would include several extraction phases. While subject to ongoing project development and future detailed studies, seven extraction phases are currently envisaged. The indicative layout of these extraction phases is identified in **Figure 1** and Attachment 01.

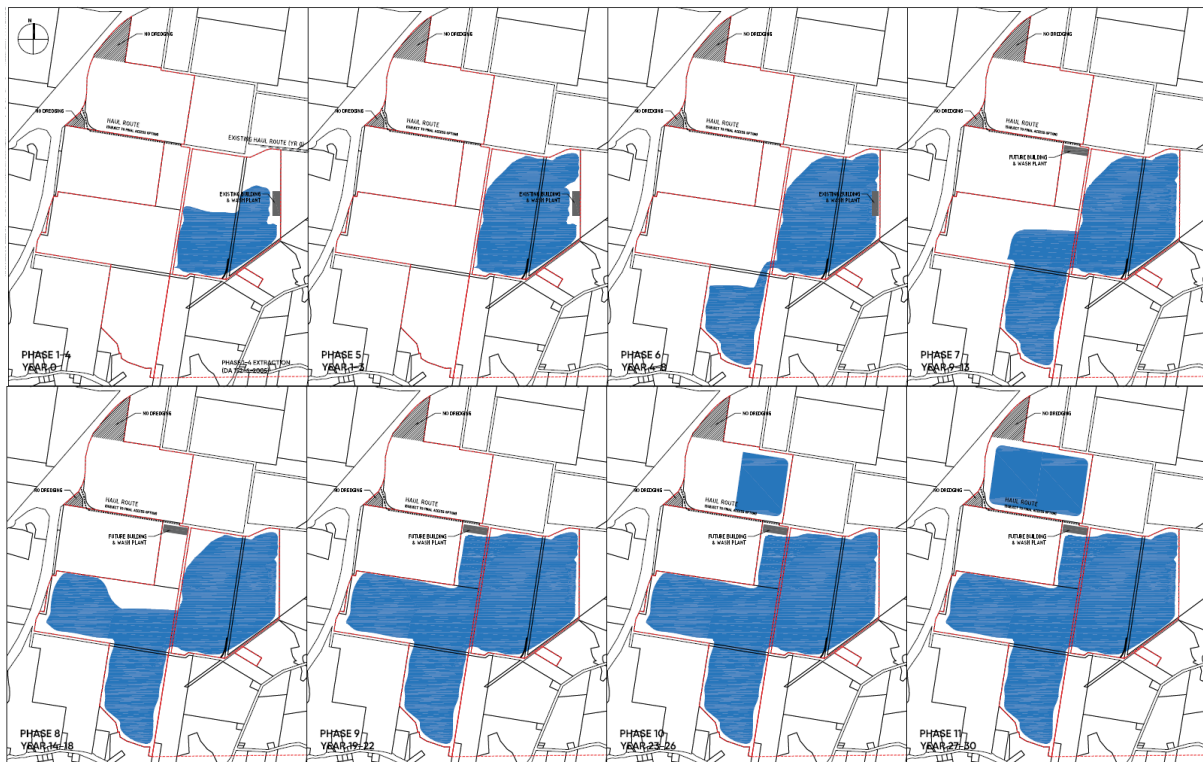


Figure 1: Extraction Phases Concept Plan

3.3.2 Access

To achieve the intended 950,000 tonnes per annum extraction rate, the use of Altona Road and Tweed Coast Road as a haulage route would be abandoned. Connection to the Tweed Valley Way Pacific Highway interchange for operational access and haulage would be provided in its place. However, the proposed end use access (detailed within Section 3.3.3) would be maintained via Altona Road.

A range of connection options are being investigated. These initial options are identified within the Traffic Impact and Access Methodology & Scoping Report included under Attachment 15.

3.3.3 End Use

Project end use would be a public access multi-use facility which would support recreational and educational activities and create flora and fauna habitat. In assessing the initial end-use options for the site, the following aspects were derived as the core goals that must be achieved by the end-use proposal:

- A self-sustaining, water body with stable acceptable water quality;
- A diverse ecosystem of native flora designed to provide habitat for native fauna;
- A visually pleasing site with water bodies and vegetation designed to achieve a 'natural' appearance;
- Low maintenance infrastructure to enhance the recreational appeal of the site; and
- The incorporation of any necessary infrastructure to ensure public safety.

As part of end use investigations, land uses including but not necessarily limited to 'Recreation Area', 'Environmental Facility', 'Information and Education Facility', 'Educational Establishment', 'Food and Drink Premises' and 'Wetland' are being investigated. These uses could take the form of:

- Public Open Space;
- Public/Private Sporting Facility (Closed Water Rowing Course, Running Course, etc);
- Future Restaurant or Café;
- Educational Establishment (TAFE, University, Schools) affiliation (a site for practical components of ecological studies, environmental management studies, etc);
- Ecological restoration and habitat creation.

A preliminary end use concept plan is included under Attachment 02.

An analysis of the potential land use definitions and permissibility of the end use has been outlined within Section 5.3 Table 11 of this report.

3.3.4 Staff

The project would maintain similar staff levels to existing operations onsite. Current operations require three full time staff. While subject to ongoing project development an additional two onsite staff maybe required during operational phases.

The project would require the proponent to expand their offsite staff numbers as the additional haulage would require additional truck drivers. A total number of additional drivers is not currently known.

Staffing requirement (if any) of end use is not currently known.

3.3.5 Material Import

The project would include an allowance to import 60,000 tonnes per annum of Virgin Excavated Natural Material (VENM) for the purposes of backfilling, armoring lake edges, rehabilitation works, etc.

3.3.6 Interim Agricultural Use / Agistment

Until an extraction phase comes online, the project would maintain existing agricultural use on the property. This use currently comprises predominately cattle grazing plus a small area of tea tree cultivation in the part of the project site identified as Phase 5. The land will be leased back for agistment as appropriate. This agistment process would require ongoing adjustment to site fencing as phases of extraction progress.

3.3.7 Overburden

The extraction areas are topped with material containing organic matter to a depth of approximately 300mm. This overburden material would be progressively stripped from the active extraction phase as required to allow sand extraction. It is anticipated this material would be utilised as part of site rehabilitation and habitat creation. Any overburden material that cannot be utilised would be removed from the project site.

3.3.8 Lighting

The project seeks approval for 24 hours, seven days per week operations and as a result lighting will be required. While it is anticipated that the site would only be illuminated to the extent required to facilitate operational requirements, detailed consideration of the positioning and design of such lighting is still to be completed.

3.3.9 Onsite Waste Management

The project would not introduce any additional waste streams or generating activities. Existing waste streams on site include general 'office waste', effluent (staff toilets), small quantities of oils, grease and machinery consumables, and fines materials from sand processing. These materials are currently managed appropriately as part of Phase 1 to 4 operations and it is expected that these management measures would continue to be applied.

Small quantities of herbicides maybe stored onsite to facilitate general site maintenance.

3.3.10 Machinery Servicing

Machinery and equipment servicing, and repair currently occurs onsite as part of Phase 1 to 4 operations. Facilities for this purpose form part of the existing onsite buildings and processing plant. The project would maintain these existing activities.

3.4 Rationale for the project and why it is important

For the period 2013 to 2016, the concrete market in South East Queensland (SEQ) and Northern New South Wales (NNSW) experienced significant growth, with the demand for fine sand increasing at a similar rate, as detailed in **Table 2**.

Table 2: SEQ and NNSW growth in fine sand between 2013 and 2016

Year	Increase (%)
2013	Base year
2014	+14.4%
2015	+10.6%

2016**+7.1%**

Due to this increasing market demand for sand in SEQ and NNSW, in June 2017 the proponent submitted a Modification Application to the NSW Department of Planning and Environment (DPE) (now DPIE) seeking an increase in the annual sand extraction limit at HTSP.

On 20 August 2018, DPE issued a Notice of Modification approving the transport from site of up to 500,000 tonnes of 'Extractive Material' in any financial year. The approval also included conditions limiting truck movements per hour and the requirement to undertake road upgrade works.

The market demand subsequently softened slightly, however going forward is forecast to increase again in upcoming years, as detailed below.

Table 3: SEQ and NNSW fine sand demand predictions 2016–2022

Year	Increase (%)
2016	Base year
2017	–0.5%
2018	–3.8%
2019	–5.3%
2020	+0.3%
2021	+8.4%
2022	+2.4%

The above figures show a net increase of some 30–35% over the period 2013–2022, with this growth expected to continue given the ongoing demands for housing, civil construction, infrastructure, hospitals, schools, etc. in the highly desirable SEQ and NNSW regions.

The HTSP site is a state significant resource producing high quality sands for supply to the concrete and construction industry and is in a strong position to meet these predicted demand trends. As such, the proponent seeks to expand their existing operation and increase the current 500,000 tonne per annum limit, up to a maximum 950,000 tonnes per annum.

As well as enabling HTSP to meet the ongoing growth in market demand, this increase, and expansion ensures additional contingency for HTSP to replace and/or supplement alternate fine sand sources if necessary.

3.5 Relationship to other major projects and/or developments

3.5.1 Existing HTSP (Phases 1 to 4)

HTSP is currently operating on part of the project site with Phase 1 to 4 either completed or currently under extraction. Approval of the current extraction phases are broadly summarised as follows:

- Phase 1 approved 1995 (TSC reference: T4/2562)
- Phase 2 approved 2001 (TSC reference: DA0041/2001)
- Phase 3 and 4 re-extraction (DA 152-6-2005 (and subsequent modification)). Phase 5 was not approved but acknowledged in amendment to DA 152-6-2005.

The most recent approval provided by the DPE (now DPIE) on 20 August 2018 was an amendment to DA 152-6-2005. This amendment provided an increase to the number of allowable truck movements to and from the site per day and increased the annual extraction rate to 500,000 tonnes per annum.

As part of this amendment, relevant government agencies and stakeholders were consulted to determine the key issues and how these may be avoided or mitigated. Issues raised related to the proposed truck numbers, access via Altona Road and the intersection at Crescent Street and Tweed Coast Road. These issues were resolved through consent conditions requiring upgrades to the relevant roads and intersections prior to additional truck movements occurring. The number of truck movements for HTSP Phase 1 to 4 is limited to 10 trucks from the site in any hour prior to completion of upgrade. Once upgrades are completed, 18 trucks from the site in any hour is permitted.

Currently HTSP Phase 1 to 4 operations are limited to the following operating hours:

Table 4: Phase 1 to 4 approved hours of operation

Activity	Permissible Hours
Quarrying operations (excluding loading and dispatch of trucks)	<ul style="list-style-type: none"> • 7am to 5pm Monday to Friday • 7am to 4pm Saturday • At no time on Sundays or public holidays
Loading and dispatch of trucks	<ul style="list-style-type: none"> • 7am to 5pm Monday to Friday • 7am to 12pm Saturday • At no time on Sundays or public holidays
Maintenance	<ul style="list-style-type: none"> • May be conducted at any time, provided that these activities are not audible at any privately-owned residence

3.5.2 Cudgen Lakes Sand Operation

The Cudgen Lakes sand operation is located on Lot 2 DP216705 directly to the east of the project site. This 'Extractive Industry' was established under major projects approval MP05_0103B, with the most recent modification MOD2 approved 22 January 2019. The 'Extractive Industry' occupies approximately 67ha of land. Operations are permitted until 31 December 2047 with an approved maximum extraction depth of -20m AHD.

The current Cudgen Lakes consent allows for a maximum extraction of 650,000 cubic metres of extractive material from the site in any year. Transport of the materials is limited to a maximum of 300,000 tonnes of materials transported by road per year, with the remaining extracted material to be pumped via pipelines to nearby development sites for filling purposes.

Figure 2 below illustrates the current approved boundaries of the Cudgen Lakes sand operation and the associated pipeline corridors.

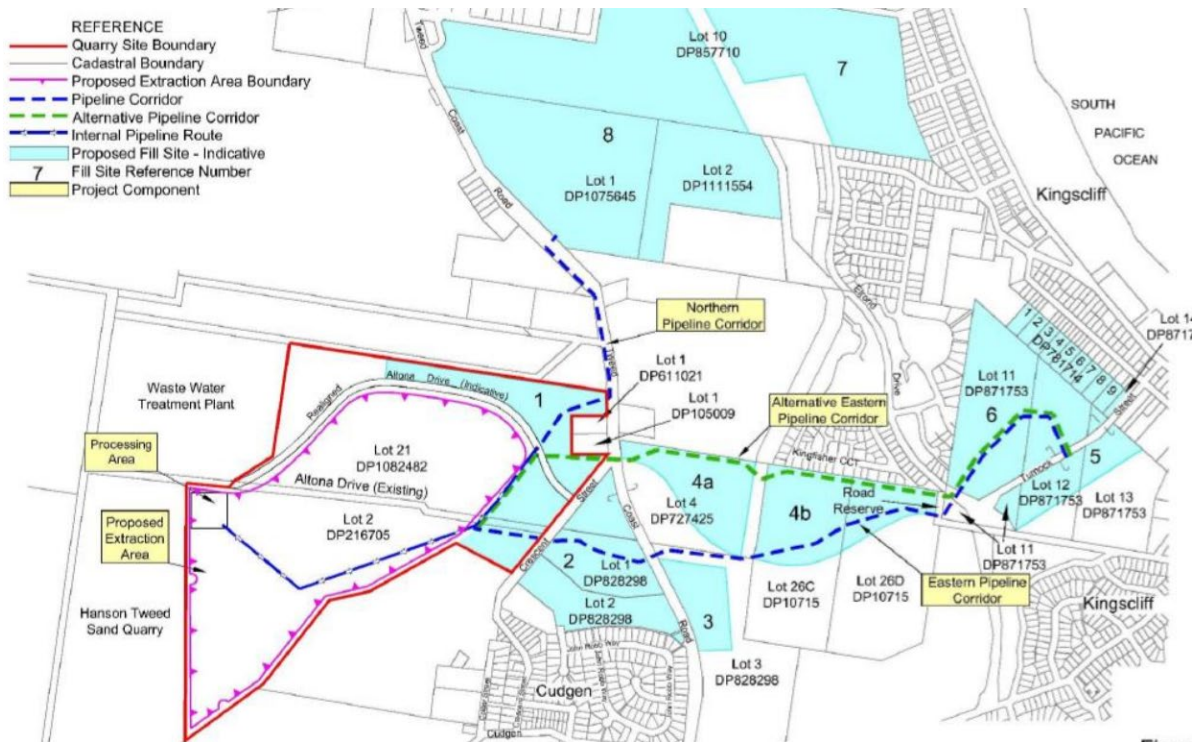


Figure 2: Approved Cudgen Lakes Sand Operation

The approved hours of operation are outlined within Table 5.

Table 5: Approved Cudgen Lakes Sand Hours of operation

Activity	Permissible Hours
Site establishment, dry processing, product transport by road, VENM receipts, other quarrying operations not specified	<ul style="list-style-type: none"> 7am – 6pm Monday to Friday 7am – 1pm Saturday At no time Sunday or Public holidays
Sand extraction by dredging and pumping to the processing plant, wet processing	<ul style="list-style-type: none"> 7am – 10pm Monday to Friday 7am – 4pm Saturday At no time Sunday or Public holidays
Sand extraction by dredging and pumping to fill sites	<ul style="list-style-type: none"> 7am – 6.30pm Monday to Friday 7am – 1pm Saturday At no time Sunday or Public holidays
Operation of dredge to fill pipeline with water or pipeline flushing	<ul style="list-style-type: none"> 6.30am – 7pm Monday to Friday 6.30am – 1.30pm Saturday At no time Sunday or Public holidays
Maintenance (if inaudible at neighbouring residences)	Any day

Prior to the upgrade of Altona Road and the Tweed Coast Road/ Crescent Street intersection, dispatch has been approved between 9am and 3pm daily for up to four laden trucks per hour and 10 laden trucks per day.

The latest modification required that no vehicles are to access the site from Crescent Street through the Cudgen Village whereby all access to and from the site is to be via Tweed Coast Road.

The approval of the 'Extractive Industry' required reasonable measures to minimise the visual and off-site lighting impacts of the project.

The allowable noise generated by the project has the following restrictions where it does not exceed the below criteria at any residence on privately-owned land

Table 6: Approved Cudgen Lakes Sand Noise Restrictions

Receiver	Day and Evening L _{Aeq} (15minute) dB(A)	Shoulder L _{Aeq} (15minute) dB(A)
Residences on privately owned land	47	44

3.5.3 Australia Bay Lobster Producers Facility

The subject land to the west of the site at 9484 Tweed Valley Way, Chinderah (more properly known as Lot 1 DP1192506) comprises the Australian Bay Lobster Producers Pty Ltd (ABLP) facility. The ABLP facility is a commercial aquaculture operation. The most recent modification to the facility was approved 23rd September 2013 under DA282-11-2004-i MOD 2. The development has approval over three stages, once all stages are complete the proposal will occupy an area of 45ha and be able to produce approximately 3228 tonnes of product a year.

The development involves pumping clean seawater from Dreamtime Beach in Kingscliff for use in growing operations. Spent seawater is then conveyed back to Council's Sewage Treatment Plant at West Kingscliff for discharge. The approval for the facility included requirement for the upgrade of Altona Road / Melaleuca Road for access to the Pacific Motorway.

The hours of operation of the facility are currently restricted to:

- 7am – 6pm Monday to Friday
- 8am – 1 pm Saturdays
- At no time on Sundays or Public Holidays

It is noted that there are currently two modifications lodged to this major project approval which are being assessed by the DPIE. The most recent approval comprises of eight components relating to the update of the consent to support the evolving operation requirements of the ABLP facility and future development including the addition of an onsite caretaker's residence.

3.5.4 Other Major Projects

Several additional major projects exist within the TLGA. These include but are not necessarily limited to:

- Tweed Valley Hospital
- Kings Forest
- Cobaki Lakes
- Area E (Altitude Aspire)
- Casuarina Town Centre (Final Stage); and
- The Rise Terranora

While located within the same LGA, the project has no direct linkage to, or influence upon these major projects. However a significant indirect link exists; and it is noted the sand resource found on the site is one of the primary ingredients in concrete batching. Concrete will be a critical material in constructing all the above major projects.

3.6 Construction Activities

Construction activities associated with the project and their timing are anticipated as follows:

Table 7: Proposed Construction Activity at each Phase

Phase	Construction Activity
5	<ul style="list-style-type: none"> • Access construction (Tweed Valley Way Pacific Highway Interchange connection) • Progressive overburden stripping • Progressive rehabilitation and end use establishment • Agricultural fencing
6	<ul style="list-style-type: none"> • Start new lake • Progressive overburden stripping • Progressive rehabilitation and end use establishment • Agricultural fencing
7	<ul style="list-style-type: none"> • Relocation of wash plant and associated buildings • Progressive overburden stripping • Progressive rehabilitation and end use establishment • Agricultural fencing
8	<ul style="list-style-type: none"> • Progressive overburden stripping • Progressive rehabilitation and end use establishment • Agricultural fencing
9	<ul style="list-style-type: none"> • Progressive overburden stripping • Progressive rehabilitation and end use establishment • Agricultural fencing
10	<ul style="list-style-type: none"> • Start new lake • Progressive overburden stripping • Progressive rehabilitation and end use establishment • Agricultural fencing
11	<ul style="list-style-type: none"> • Progressive overburden stripping • Final rehabilitation and end use establishment

The specifics of these works including likely methodology and equipment required will be established as the project develops and detailed studies are completed.

Construction activities would be limited to 7am to 6pm Monday to Sunday. The project would, however, seek specific exemption relating to the operation and haulage access construction associated with Phase 5. Night works could be required depending on the ultimate access option selected and the need to ensure the safe operation of the Pacific Highway.

3.7 Decommissioning Activities

Decommissioning activities associated with the project and their timing is anticipated as follows:

Table 8: Proposed Decommissioning Activity at each Phase

Phase	Decommissioning Activity
5	<ul style="list-style-type: none"> • None
6	<ul style="list-style-type: none"> • Existing wash plant and associated buildings
7	<ul style="list-style-type: none"> • None

8	• None
9	• None
10	• None
11	• Wash plant and associated buildings • Access demolition (Tweed Valley Way Pacific Highway Interchange connection) *

**decommissioning of the operations and haulage access to be confirmed as the project develops and detailed studies and consultation are completed. This access may remain after completion of extraction activities for end use and ABLP access.*

As rehabilitation and establishment of end use would occur as phases of extraction complete, these activities have not been listed in this decommissioning section; rather these activities are considered ongoing construction activities and identified in Section 3.6.

The specifics of these works including likely methodology and equipment required will be established as the project develops and detailed studies are completed.

Decommissioning activities would be limited to 7am to 6pm Monday to Sunday.

4.0 Site details

4.1 Legal Description, Ownership & Size

The project site comprises nine allotments and subject to ongoing project design and detailed investigations three road reserves. The legal description, registered owners / controlling authority (at time of SEAR's request) and the area of land forming the project site are summarised in the following table:

Table 9: Property Description, Owner/ Controlling Authority, and Lot Size

Property description	Owner / Controlling Authority	Lot Size
Lot 22 DP1082435	Hanson Construction Materials Pty Ltd	74.56ha
Lot 23 DP1077509	Hanson Construction Materials Pty Ltd	2.552ha
Lot 494 DP720450	Hanson Construction Materials Pty Ltd	1042m ²
Lot 1 DP1250570	Cudgen Land Pty Ltd	90ha
Lot 2 DP1192506	Cudgen Land Pty Ltd	11.12ha
Lot 3 DP1243752	Cudgen Land Pty Ltd	1.612ha
Lot 51 DP1166990	Andrew Noel Brinsmead	55.13ha
Lot 50 DP1056966	Andrew Noel Brinsmead	1.094ha
Lot 51 DP1056966	Roads and Traffic Authority of NSW	0.7690ha
Altona Road/Melaleuca Road Reserve	Tweed Shire Council	N/A
Pacific Hwy / Tweed Valley Way Interchange Road Reserve	RMS / Tweed Shire Council*	N/A
Unnamed Road Reserve	Tweed Shire Council	N/A

** The RMS is the roads authority for any declared freeway and Tweed Shire Council is the roads authority for Tweed Valley Way. Refer Attachment 11 for copy of RMS consultation minutes that include diagram showing the demarcation of these responsibilities.*

The above allotments and road reserves are show in **Figure 3** and Attachment 03 detailing the lot location and identification.

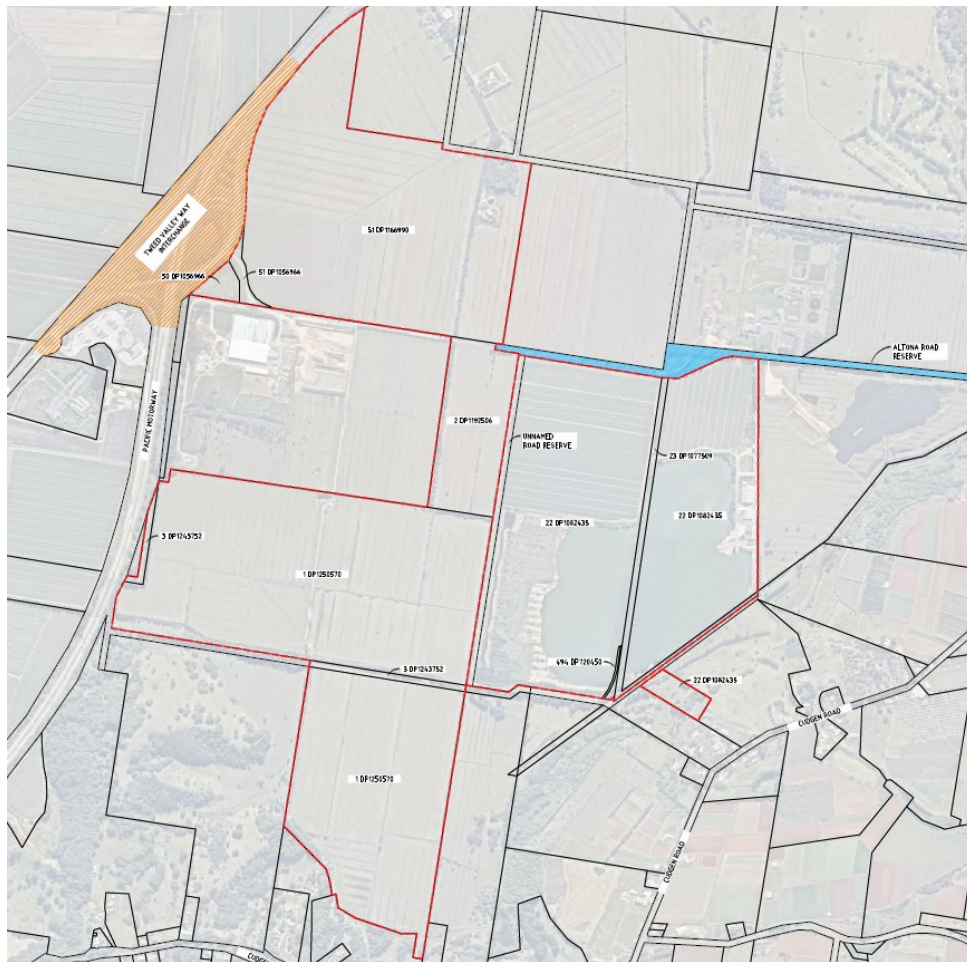


Figure 3: Lot layout and identification

Title Searches have been completed for the allotments forming part of the project site. Refer Attachment 07 for copy of title search results.

4.1.1 Unnamed Road Reserve

The site encompasses a piece of unformed road reserve, located between Lot 22 DP1082435, Lot 1 DP1250570 and Lot 2 DP1192506. This road reserve is understood to be vested to and under the control of Tweed Shire Council. The location of this piece of road reserve is identified in **Figure 3** and Attachment 03.

4.2 Regional & Local Context

The project site is located within the Tweed Local Government Area (TLGA) in the suburb of Cudgen NSW 2487. In a regional context, the site is located approximately 8.5 kilometres south of the New South Wales/Queensland border and approximately 1.5km west of Kingscliff. **Figure 4** shows the regional context of the site.

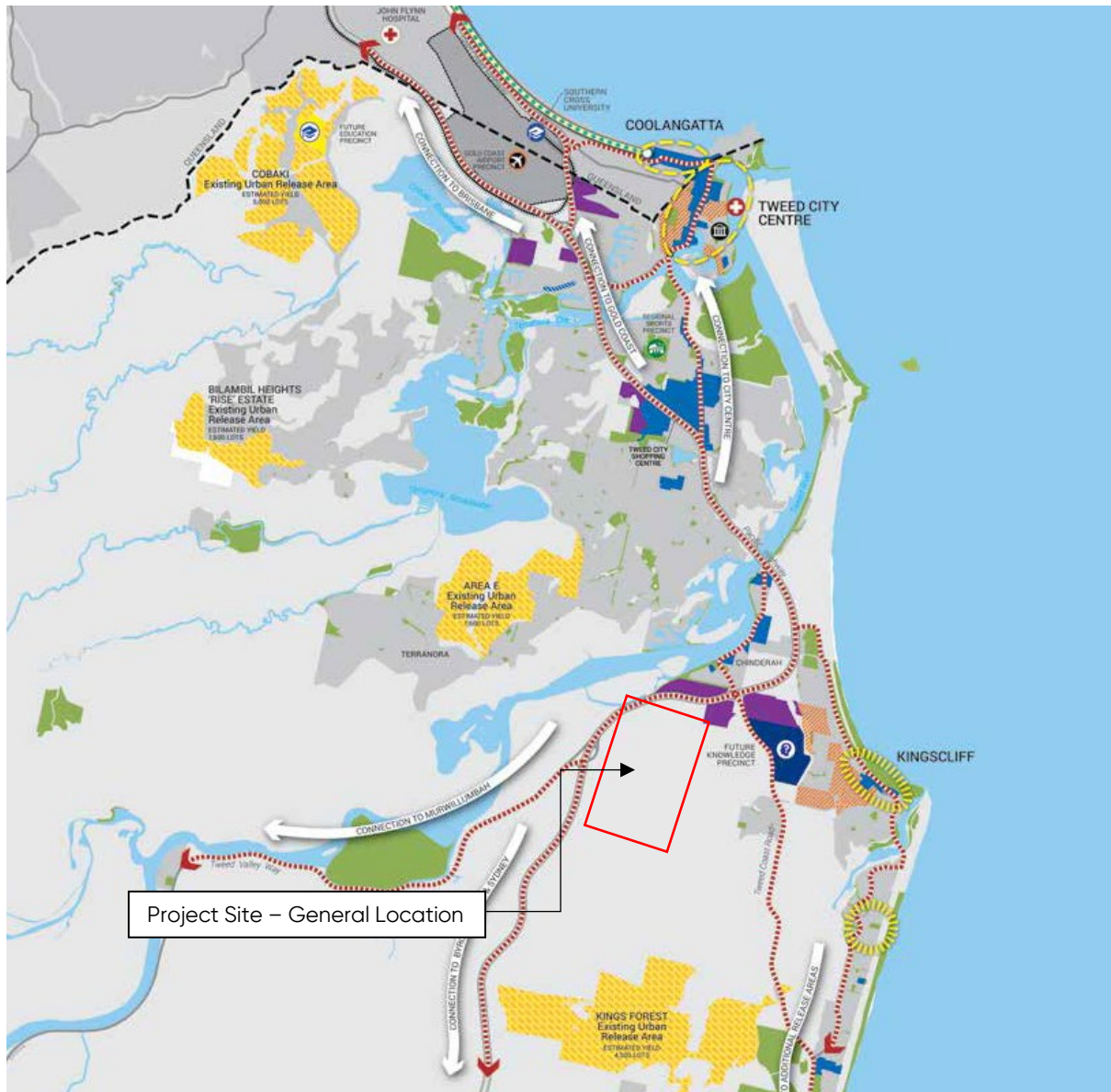


Figure 4: Regional Context of the Subject land (Source: North Coast Regional Plan 2036)

Locally, the site is directly adjacent the Pacific Highway and Tweed Valley Way interchange. The site bounds the ABLP Facility, Tweed Shire Council's Kingscliff Wastewater Treatment Plant and Cudgen Lakes sand operations. More broadly the site is positioned in proximity to the Chinderah north bound Highway Service Centre and Melaleuca Station Memorial Gardens and Crematorium. **Figure 5** shows the local context of the site.

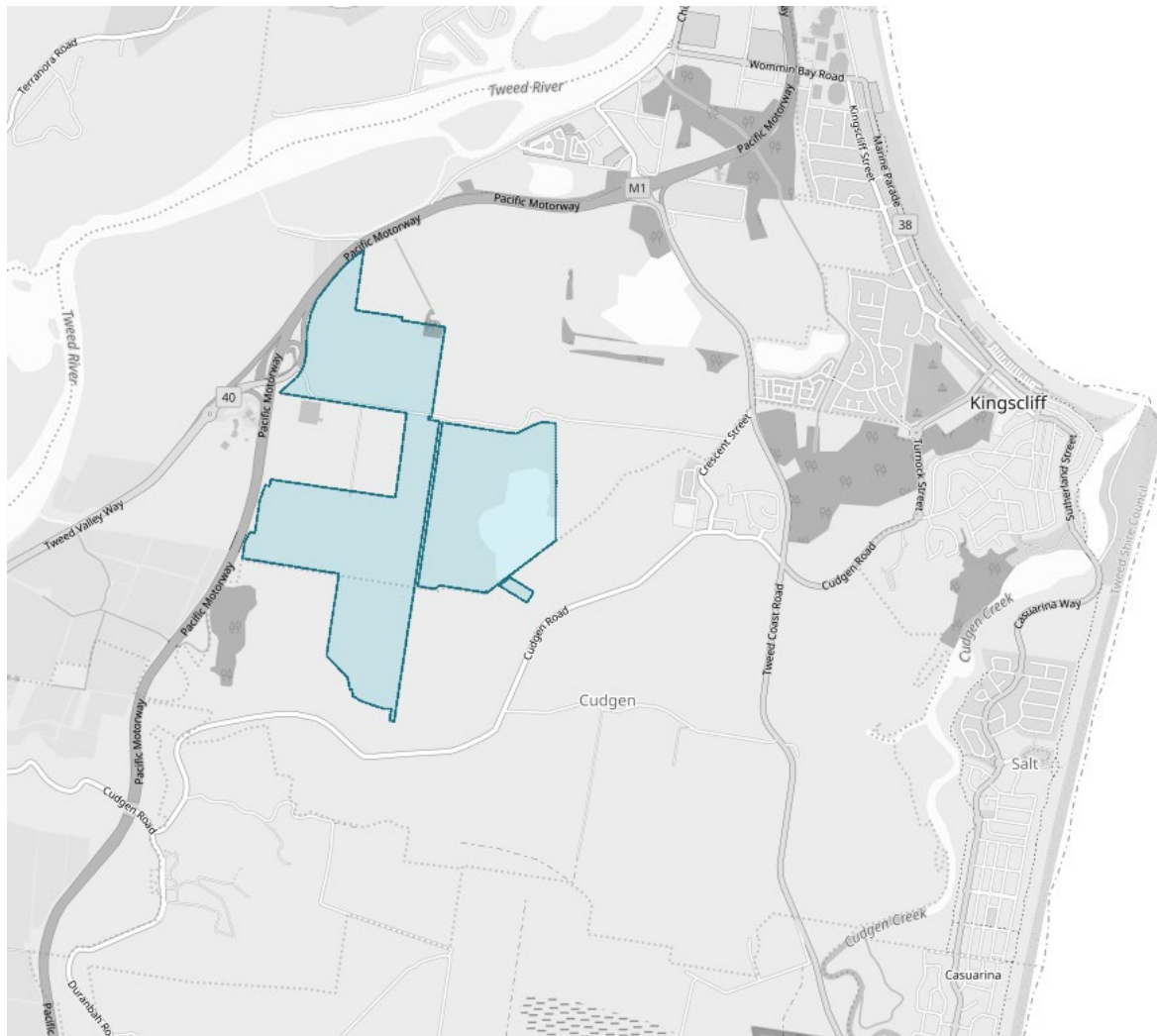


Figure 5: Local context of the subject land

4.3 Topography

The site is relatively flat, forming part of an existing flood plain. Along the southern boundary the site abuts the ridge that separates the site from the red volcanic soils of the Cudgen Plateau. Level and Detail Survey is yet to be completed; however initial Lidar data has been examined. Refer copy of lidar contours of the site and immediate surrounds under Attachment 06. The lidar contours are provided at 1m intervals.

4.4 Cane Drains

The site includes two primary cane drains, one that traverses north south along the edge of Lot 22 DP1082435, dog legs to run along the boundary of Lot 2 DP1192506 / Lot 1 DP1192506 and finally crossing through Lot 51 DP1166990 into land not part of the proposal; and a second running east west along the edge of Lot 3

DP1243752 and through the south western corner of Lot 1 DP1250570 crossing into the Pacific Highway Road Reserve. The location of these drains is identified in **Figure 6**.

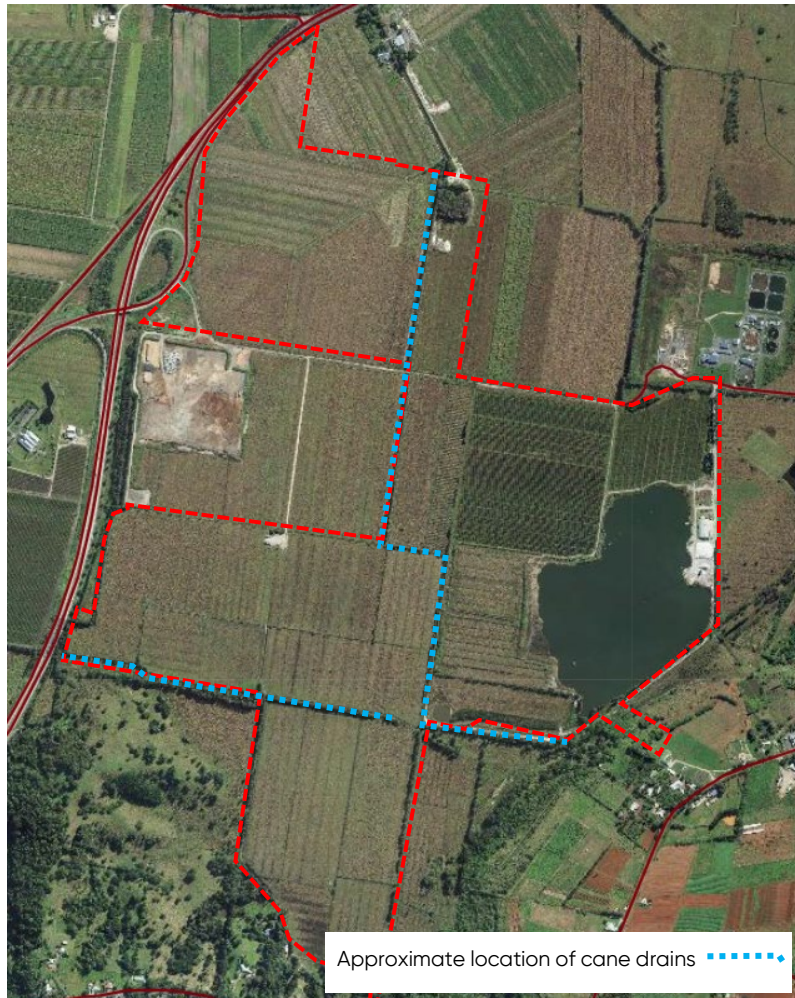


Figure 6: Indicative Location of Cane Drains on the subject land

4.5 Services

Initial searches indicate the site is predominately clear of services, however the following services have been identified on or traversing the site.

- Water and Sewer pipelines running from the ABLP facility to the Tweed Shire Council Kingscliff WWTP. These services run through Lot 2 DP1192506 into the Altona Road Reserve;
- Nextgen Cable and conduits running along the edge of the Pacific Highway road reserve against Lot 51 DP1166990, Lot 51 DP1056966 and Lot 50 DP1056966
- Optus Cable that appears to run from the north and terminate at the northern most extent of Lot 51 DP1166990

Refer Services Plan (DBYD) provided under Attachment 04.

Initial searches undertaken did not return results relating to National Broadband Network, Telstra or Essential Energy infrastructure. Further investigations of any assets owned by these authorities will be required.

4.6 Environmental setting (Sensitive Receivers)

The site is located 550m south east of the Tweed River proper and 85m from an associated tidal tributary. The site is separated from the Tweed River by the Pacific Highway. More broadly the site is located approximately 2km from the Stotts Island Nature Reserve and 3km from the Cudgen Nature Reserve. The location of these items is identified in **Figure 7** and Attachment 03.



Figure 7: Surrounding Sensitive Receivers Natural

Directly adjoining the bounds of the site, the nearest sensitive receptors consist of residential dwellings. These dwellings average between 200–300m from the subject land. An exception to this is the dwelling located on Lot 3 DP616805, this dwelling is approximately 30m from the bounds of the site. The location of the allotments which directly adjoin the boundary of the subject site and approximately location of dwellings are identified in **Figure 8** and Attachment 03.

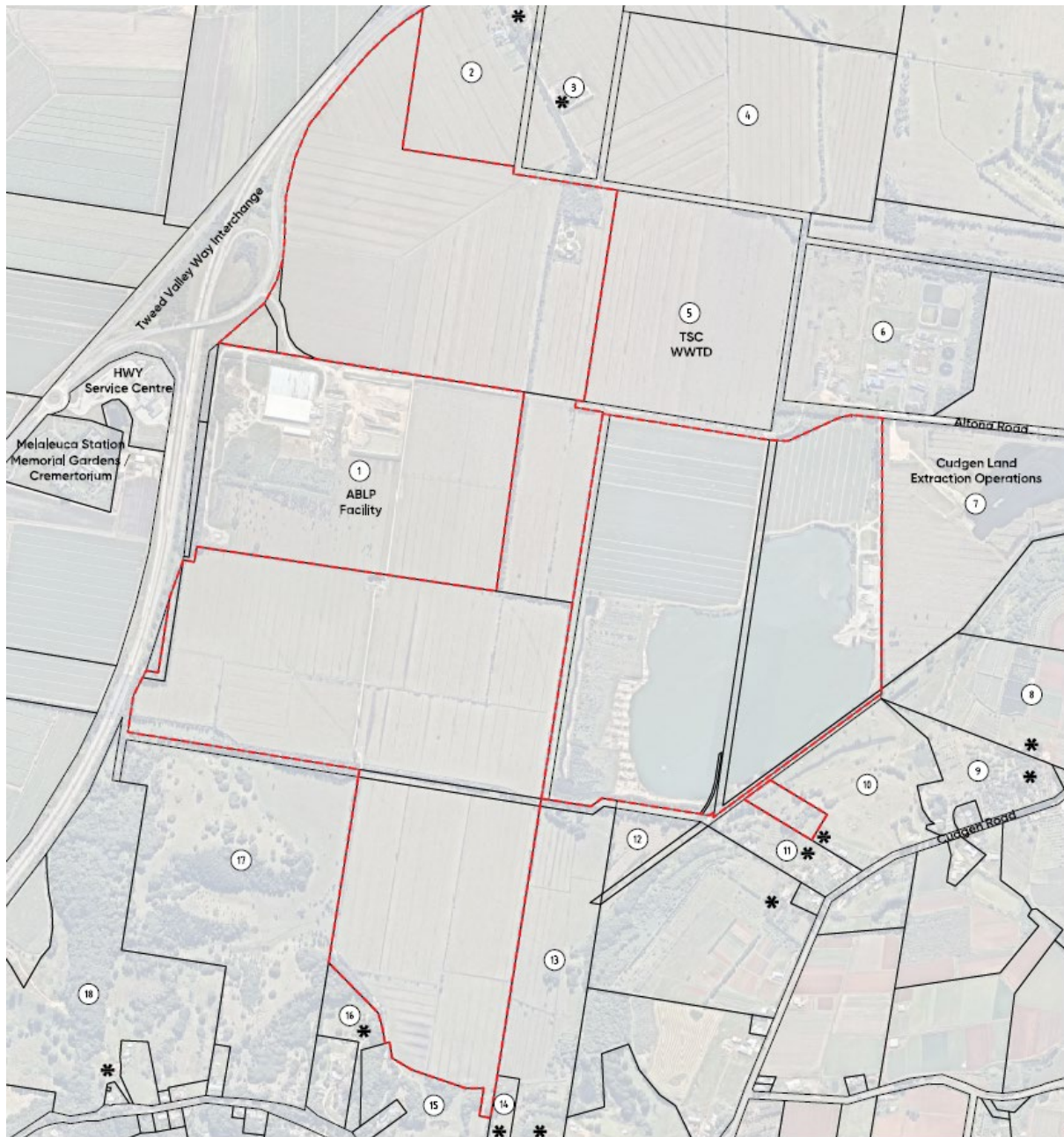


Figure 8: Surrounding Sensitive Receivers Dwellings

5.0 Strategic and statutory context

5.1 State Significant Development Criteria

Clause 8 of State Environmental Planning Policy (State and Regional Development) 2011 identifies that certain developments are declared to be State Significant Development for the purposes of Section 4.36 of the EP&A Act 1979. A development is State Significant Development if it meets the following requirements:

- (a) *the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and*
- (b) *the development is specified in Schedule 1 or 2.*

The project meets the definition of 'Extractive Industry'. 'Extractive Industry' is permissible with consent on the site under both the Tweed Local Environmental Plan (TLEP) 2014 and State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007. The proposal is not identified as exempt development, complying development, permissible without consent or prohibited development.

Under Schedule 1 of *State Environmental Planning Policy (State and Regional Development) (2011)*, development for the purpose of 'Extractive Industry' that meets any of the following is identified as State significant development (SSD).

- (a) *extracts more than 500,000 tonnes of extractive materials per year, or*
- (b) *extracts from a total resource (the subject of the development application) of more than 5 million tonnes, or*
- (c) *extracts from an environmentally sensitive area of State significance.*

The project would extract 950,000 tonnes per annum from a total resource of between 30 and 35 million tonnes. The project meets both Schedule 1 Clause 7(1)(a) and (b) and is State Significant Development.

5.2 North Coast Regional Plan 2036

The North Coast Regional Plan 2036 contains several directions and actions for implementation of sustainable development in the North Coast Region. Of relevance to the site and project are directions 11 and 13.

Direction 11 of the Plan is to 'Protect and enhance productive agricultural land'. A portion of the site is mapped as important farmland; however, the plan also includes criteria for assessing the suitability of important farmland for non-agricultural land uses. The Important Farmland Interim Variation Criteria is identified as:

Table 10: Important Farmland Interim Variation Criteria (Source: North Coast Regional Plan 2036)

Important Farmland Interim Variation Criteria	
Land may be suitable for uses other than farmland if:	
Agricultural capability	<ul style="list-style-type: none"> The land is isolated from other important farmland and is not capable of supporting sustainable agricultural production
Land use conflict	<ul style="list-style-type: none"> The land use does not increase the likelihood of conflict and does not impact on current or future agricultural activities in the locality
Infrastructure	<ul style="list-style-type: none"> The delivery of infrastructure (utilities, transport, open space, communications and stormwater) required to service the land is physically and economically feasible at no cost to State and Local Government

Environment and heritage	<ul style="list-style-type: none"> The proposed land uses do not have an adverse impact on areas of high environmental value, and Aboriginal or historic heritage significance
Avoiding risk	<ul style="list-style-type: none"> Risk associated with physically constrained land are identified and avoided, including: <ul style="list-style-type: none"> Flood prone; Bushfire-prone; Highly erodible; Severe slope; and Acid sulfate soils.

With careful design, most of the criteria can be achieved by the project.

Direction 13 of the Plan is for the 'Sustainable Management of Natural Resources' and notes the following:

'...it is important that these resources are not affected or sterilised by the encroachment of sensitive land uses, and that mining activities are undertaken sensitively to minimise negative impacts on the environment, significant agricultural land, neighbouring businesses and the community. Planning for these activities will help to avoid potential land use conflicts.'

Action 13.2 of the plan provides the following goal:

Plan for the ongoing productive use of lands with regionally significant construction material resources in locations with established infrastructure and resource accessibility.

The proposed expansion of the existing HTSP is in line with the intent of Direction 13 and Action 13.2. Further to this, the proposal is anticipated to avoid land use conflicts as the proposal will not introduce a new land use into the locality or a land use that would prevent on going agricultural activities in the broader locality.

5.3 Tweed Local Environmental Plan 2014

The site and project are located within the TLGA. The TLEP 2014 is the principal Environmental Planning Instrument (EPI) regulating land use within the TLGA. Under this plan most of the site is zoned RU1 Primary Production with a small portion of Lot 1 DP 1250570 being zoned RU2 Rural Landscape. This zoning has been represented in **Figure 9** and Attachment 03.

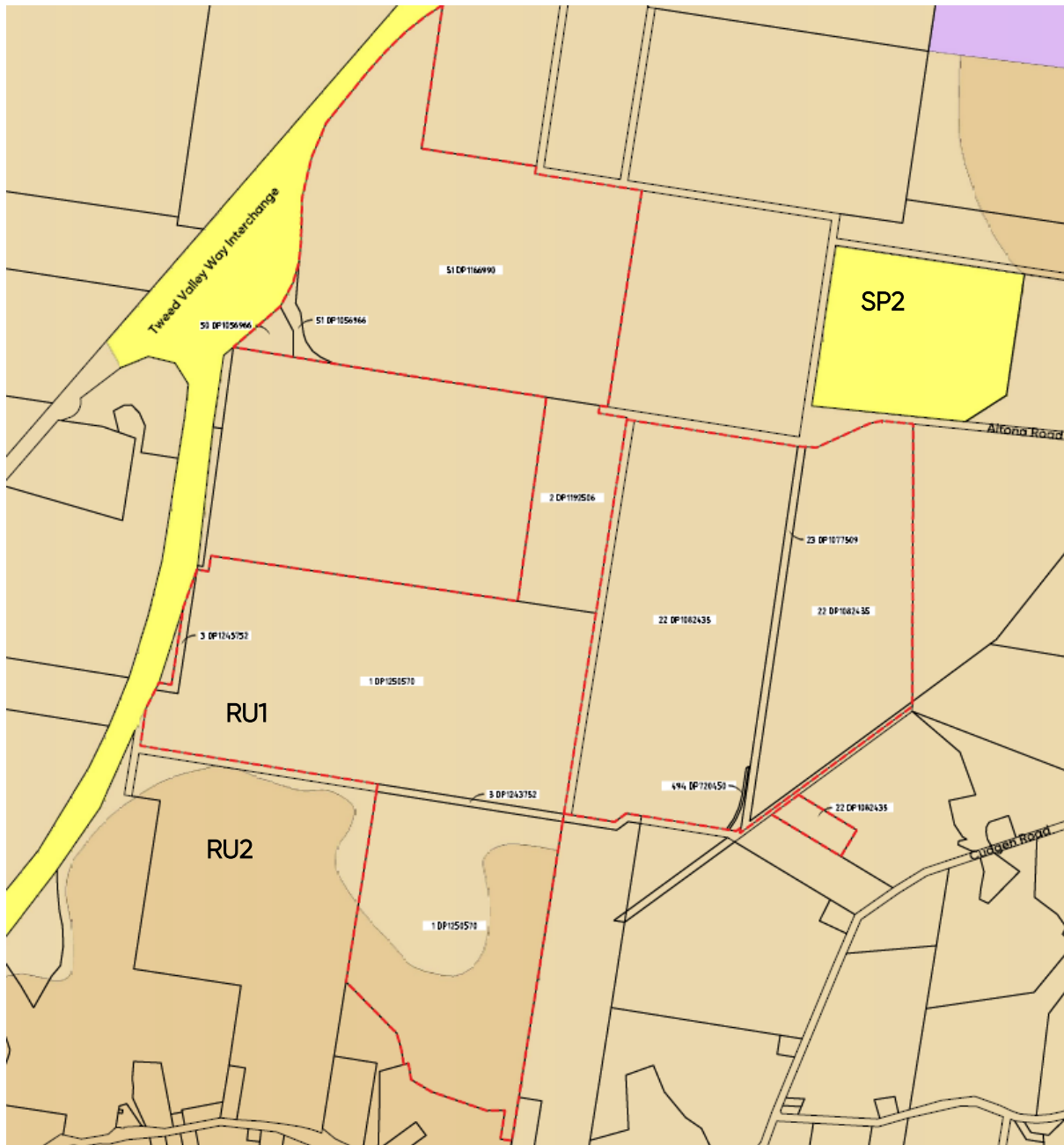


Figure 9: Land Zoning of Subject Site (Source: Tweed Shire Council)

The objectives and Land Use Table of the RU1 Primary Production and RU2 Rural Landscape Zones are as follows:

Zone RU1 Primary Production

1 Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.

- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To protect prime agricultural land from the economic pressure of competing land uses.

2 Permitted without consent

Environmental protection works; Extensive agriculture; Home occupations; Intensive plant agriculture

3 Permitted with consent

Agricultural produce industries; Animal boarding or training establishments; Aquaculture; Bed and breakfast accommodation; Boat launching ramps; Boat sheds; Cellar door premises; Dual occupancies (attached); Dwelling houses; Environmental facilities; Extractive industries; Farm buildings; Farm stay accommodation; Flood mitigation works; Forestry; Group homes; Helipads; Home-based child care; Home businesses; Home industries; Industrial retail outlets; Intensive livestock agriculture; Jetties; Open cut mining; Plant nurseries; Roads; Roadside stalls; Rural workers' dwellings; Turf farming; Water recreation structures; Water storage facilities

4 Prohibited

Any development not specified in item 2 or 3

And

Zone RU2 Rural Landscape

1 Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To maintain the rural landscape character of the land.
- To provide for a range of compatible land uses, including extensive agriculture.
- To provide for a range of tourist and visitor accommodation-based land uses, including agri-tourism, eco-tourism and any other like tourism that is linked to an environmental, agricultural or rural industry use of the land.

2 Permitted without consent

Environmental facilities; Environmental protection works; Extensive agriculture; Home occupations; Intensive plant agriculture

3 Permitted with consent

Airstrips; Animal boarding or training establishments; Aquaculture; Bed and breakfast accommodation; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cellar door premises; Cemeteries; Community facilities; Crematoria; Depots; Dual occupancies (attached); Dwelling houses; Eco-tourist facilities; Educational establishments; Extractive industries; Farm buildings; Farm stay accommodation; Flood mitigation works; Forestry; Funeral homes; Garden centres; Group homes; Helipads; Home-based child care; Home businesses; Home industries; Hostels; Industrial retail outlets; Industrial training facilities; Information and education facilities; Intensive livestock agriculture; Jetties; Kiosks; Landscaping material supplies; Markets; Open cut mining; Places of public worship; Plant nurseries; Recreation areas; Recreation facilities (major); Recreation facilities (outdoor); Restaurants or cafes; Roads; Roadside stalls; Rural industries; Rural supplies; Rural workers' dwellings; Signage; Timber yards; Transport depots; Truck depots; Turf farming; Veterinary hospitals; Water recreation structures; Water supply systems; Wharf or boating facilities

4 Prohibited

Any development not specified in item 2 or 3

The project is an 'Extractive Industry' which is defined as follows:

extractive industry means the winning or removal of extractive materials (otherwise than from a mine) by methods such as excavating, dredging, tunnelling or quarrying, including the storing, stockpiling or processing of extractive materials by methods such as recycling, washing, crushing, sawing or separating, but does not include turf farming.

Note.

Extractive industries are not a type of industry—see the definition of that term in this Dictionary.

The materials that would be extracted by the proposal are consistent with the definition of 'Extractive Material' as follows:

extractive material means sand, soil, gravel, rock or similar substances that are not minerals within the meaning of the *Mining Act 1992*.

'Extractive Industry' is listed as 'Permitted with consent' within the Land use tables for both above mentioned zones.

Project end use would be a public access multi-use facility which would support recreational / educational activities and create flora and fauna habitat. Such a facility and activities could be considered to meet the definition of a number of land uses, including but not necessarily limited to 'Recreation Area', 'Environmental Facility', 'Information and Education Facility', 'Educational Establishment', 'Food and Drink Premises', and 'Wetland'. The definition of these land uses and their permissibility in the above-mentioned zones is summarised in the table below:

Table 11: Potential End Use Permissibility

Land Use Definition	Permissible
recreation area means a place used for outdoor recreation that is normally open to the public, and includes: (a) a children's playground, or (b) an area used for community sporting activities, or (c) a public park, reserve or garden or the like, and any ancillary buildings but does not include a recreation facility (indoor), recreation facility (major) or recreation facility (outdoor).	RU1 Primary Production No
recreation facility (outdoor) means a building or place (other than a recreation area) used predominantly for outdoor recreation, whether or not operated for the purposes of gain, including a golf course, golf driving range, mini-golf centre, tennis court, paint-ball centre, lawn bowling green, outdoor	RU2 Rural Landscape Yes
	RU1 Primary Production No

swimming pool, equestrian centre, skate board ramp, go-kart track, rifle range, water-ski centre or any other building or place of a like character used for outdoor recreation (including any ancillary buildings), but does not include an entertainment facility or a recreation facility (major).

educational establishment means a building or place used for education (including teaching), being:

- (a) a school, or
- (b) a tertiary institution, including a university or a TAFE establishment, that provides formal education and is constituted by or under an Act.

information and education facility means a building or place used for providing information or education to visitors, and the exhibition or display of items, and includes an art gallery, museum, library, visitor information centre and the like.

wetland means:

- (a) natural wetland, including marshes, mangroves, backwaters, billabongs, swamps, sedgelands, wet meadows or wet heathlands that form a shallow waterbody (up to 2 metres in depth) when inundated cyclically, intermittently or permanently with fresh, brackish or salt water, and where the inundation determines the type and productivity of the soils and the plant and animal communities, or
- (b) artificial wetland, including marshes, swamps, wet meadows, sedgelands or wet heathlands that form a shallow waterbody (up to 2 metres in depth) when inundated cyclically, intermittently or permanently with water, and are constructed and vegetated with wetland plant communities.

RU2 Rural Landscape

Yes

RU1 Primary Production

No

RU2 Rural Landscape

Yes

RU1 Primary Production

No

RU2 Rural Landscape

Yes

RU1 Primary Production

No

RU2 Rural Landscape

No

As identified above, some of the potential land uses are prohibited development. Under s4.38 of the *EP&A Act 1979*, consent for State Significant Development may be granted despite the development being partly prohibited by an Environmental Planning Instrument. As a result, despite some of the potential end uses being prohibited, it is considered that consent may still be provided as it only incorporates part of the development.

5.4 State Environmental Planning Policies

5.4.1 State Environmental Planning Policy No.33 – Hazardous and Offensive Development

This SEPP requires a Preliminary Hazard Analysis of the project against the DPIE's circulars and guidelines, to determine if the proposal is a hazardous or offensive industry. If it is likely to be a potentially hazardous or offensive industry, a Multi-Level Risk Assessment would be required.

5.4.2 State Environmental Planning Policy No.55 – Remediation of Land

The objective of SEPP 55 – Remediation of Land is to promote the remediation of contaminated land for the purpose of reducing risk of harm to human health or any other aspect of the environment. Clause 7 of the SEPP requires that contamination and remediation be considered in determining a development application.

Clause 7 of the policy requires that a consent authority must firstly consider whether a site is contaminated. If the land is contaminated, the consent authority must be satisfied that the land is suitable in its contaminated state, or it will be suitable after remediation, for the proposed development.

At minimum a preliminary site investigation would be undertaken to discharge the projects obligations under SEPP 55.

5.4.3 State Environmental Planning Policy (Coastal Management) 2018

A small section of land within the northern portion of the subject site is mapped as being within the coastal environment area and coastal use area under the State Environmental Planning Policy (Coastal Management) 2018. As such Clause 13 and Clause 14 of this SEPP are applicable to the proposed development. These clauses are reproduced below:

Clause 13 – Development on land within the coastal environment area

(1) Development consent must not be granted to development on land that is within the coastal environment area unless the consent authority has considered whether the proposed development is likely to cause an adverse impact on the following:

- (a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment,*
- (b) coastal environmental values and natural coastal processes,*
- (c) the water quality of the marine estate (within the meaning of the Marine Estate Management Act 2014), in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes identified in Schedule 1,*
- (d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms,*
- (e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,*
- (f) Aboriginal cultural heritage, practices and places,*
- (g) the use of the surf zone.*

(2) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:

- (a) the development is designed, sited and will be managed to avoid an adverse impact referred to in subclause (1), or*
- (b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or*
- (c) if that impact cannot be minimised—the development will be managed to mitigate that impact.*

(3) This clause does not apply to land within the Foreshores and Waterways Area within the meaning of Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.

And

Clause 14 Development on land within the coastal use area

(1) Development consent must not be granted to development on land that is within the coastal use area unless the consent authority:

- (a) has considered whether the proposed development is likely to cause an adverse impact on the following:*
 - i. existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,*
 - ii. overshadowing, wind funnelling and the loss of views from public places to foreshores,*
 - iii. the visual amenity and scenic qualities of the coast, including coastal headlands,*
 - iv. Aboriginal cultural heritage, practices and places,*
 - v. cultural and built environment heritage, and*
- (b) is satisfied that:*
 - i. the development is designed, sited and will be managed to avoid an adverse impact referred to in paragraph (a), or*
 - ii. if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or*
 - iii. if that impact cannot be minimised—the development will be managed to mitigate that impact, and*
- (c) has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development.*

(2) This clause does not apply to land within the Foreshores and Waterways Area within the meaning of Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005.

The proposed development is significantly separated from the coastal foreshore, headlands and rock platforms. A range of detailed studies are to be undertaken which would address the relevant elements of the SEPP.

5.4.4 State Environmental Planning Policy (Infrastructure) 2007

Clause 101 of the *State Environmental Planning Policy (Infrastructure) 2007* requires the consent authority to consider the safety, efficiency and ongoing operation of classified roads. As the project site has frontage to a classified road this clause applies. NSW RMS is given the opportunity under Clause 104 of this policy to comment on traffic generating developments or those that might impact upon a classified road. It is anticipated the relevant referral would occur as part of assessment of the project.

5.4.5 State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

The SEPP is the principal EPI dealing with Mining, Petroleum Production and Extractive Industries. The proposal is defined as an 'Extractive Industry' and as such the SEPP is applicable. The aims of the SEPP are identified below:

"2 Aims of Policy

The aims of this Policy are, in recognition of the importance to New South Wales of mining, petroleum production and extractive industries:

- (a) to provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of the State, and*
- (b) to facilitate the orderly and economic use and development of land containing mineral, petroleum and extractive material resources, and (b1) to promote the development of significant mineral resources, and*
- (c) to establish appropriate planning controls to encourage ecologically sustainable development through the environmental assessment, and sustainable management, of development of mineral, petroleum and extractive material resources, and*
- (d) to establish a gateway assessment process for certain mining and petroleum (oil and gas) development:*

- i. to recognise the importance of agricultural resources, and
- ii. to ensure protection of strategic agricultural land and water resources, and
- iii. to ensure a balanced use of land by potentially competing industries, and
- iv. to provide for the sustainable growth of mining, petroleum and agricultural industries."

The following clauses of the Policy are relevant:

Clause 7 – Development Permissible with Consent

Clauses 7(3) and (4) are in the following terms:

"7 Development permissible with consent

(3) Extractive industry

Development for any of the following purposes may be carried out with development consent:

- (a) extractive industry on land on which development for the purposes of agriculture or industry may be carried out (with or without development consent),*
- (b) extractive industry in any part of a waterway, an estuary in the coastal zone or coastal waters of the State that is not in an environmental conservation zone.*

(4) Co-location of industry If extractive industry is being carried out with development consent on any land, development for any of the following purposes may also be carried out with development consent on that land:

- (a) the processing of extractive material,*
- (b) the processing of construction and demolition waste or of other material that is to be used as a substitute for extractive material,*
- (c) facilities for the processing or transport of extractive material,*
- (d) concrete works that produce only pre-mixed concrete or bitumen pre-mix or hot-mix."*

'Extensive Agriculture' and 'Intensive Plant Agriculture' are permissible with consent in the RU1 Primary Production and RU2 Rural Landscape zones under the TLEP 2014. In accordance with Clause 7 of the SEPP, 'Extractive Industry' is permissible with development consent.

Clause 12 – Compatibility of Proposed Mine, Petroleum Production or Extractive Industry with Other Land Uses

Clause 12 is in the following terms:

"12 Compatibility of proposed mine, petroleum production or extractive industry with other land uses Before determining an application for consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must:

- (a) consider:*
 - i. the existing uses and approved uses of land in the vicinity of the development, and*
 - ii. whether or not the development is likely to have a significant impact on the uses that, in the opinion of the consent authority having regard to land use trends, are likely to be the preferred uses of land in the vicinity of the development, and*
 - iii. any ways in which the development may be incompatible with any of those existing, approved or likely preferred uses, and*
- (a) evaluate and compare the respective public benefits of the development and the land uses referred to in paragraph (a) (i) and (ii), and*
- (b) evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as referred to in paragraph (a) (iii)."*

The proposal involves the expansion of an existing approved 'Extractive Industry', the surrounding uses have been assessed and detailed within Section 3.5. As identified above the proposed land use is permissible within the RU1 Primary Production and RU2 Rural Landscape zones and is considered to be compatible with the

surrounding land uses including the existing Cudgen Lakes sand operation, ABLP Facility, and the Tweed Shire Waste Water Treatment Plant.

Clause 13 – Compatibility of Proposed Development with Mining, Petroleum Production or Extractive Industry is in the following terms:

"13 Compatibility of proposed development with mining, petroleum production or extractive industry

(1) This clause applies to an application for consent for development on land that is, immediately before the application is determined:

- (a) in the vicinity of an existing mine, petroleum production facility or extractive industry, or*
- (b) identified on a map (being a map that is approved and signed by the Minister and copies of which are deposited in the head office of the Department and publicly available on the Department's website) as being the location of State or regionally significant resources of minerals, petroleum or extractive materials, or*
- (c) Note. At the commencement of this Policy, no land was identified as referred to in paragraph (b).*
- (d) identified by an environmental planning instrument as being the location of significant resources of minerals, petroleum or extractive materials.*

Note. *Sydney Regional Environmental Plan No 9—Extractive Industry (No 2—1995) is an example of an environmental planning instrument that identifies land as containing significant deposits of extractive materials.*

(2) Before determining an application to which this clause applies, the consent authority must:

- (a) consider:*
 - i. the existing uses and approved uses of land in the vicinity of the development, and*
 - ii. whether or not the development is likely to have a significant impact on current or future extraction or recovery of minerals, petroleum or extractive materials (including by limiting access to, or impeding assessment of, those resources), and*
 - iii. any ways in which the development may be incompatible with any of those existing or approved uses or that current or future extraction or recovery, and*
- (b) evaluate and compare the respective public benefits of the development and the uses, extraction and recovery referred to in paragraph (a) (i) and (ii), and*
- (c) evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as referred to in paragraph (a) (iii)."*

The existing approved uses of the site and surrounding area have been taken into consideration under Section 3.5. Consideration and assessment of the potential impacts onto adjoining properties will be required. A Social impact assessment and community consultation will take place as part of the project.

Clause 14 – Natural Resource Management and Environmental Management Clause 14 is in the following terms:

"14 Natural resource management and environmental management

(1) Before granting consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider whether or not the consent should be issued subject to conditions aimed at ensuring that the development is undertaken in an environmentally responsible manner, including conditions to ensure the following:

- (a) that impacts on significant water resources, including surface and groundwater resources, are avoided, or are minimised to the greatest extent practicable,*
- (b) that impacts on threatened species and biodiversity, are avoided, or are minimised to the greatest extent practicable,*
- (c) that greenhouse gas emissions are minimised to the greatest extent practicable.*

(2) Without limiting subclause (1), in determining a development application for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider an assessment of the greenhouse gas emissions (including downstream emissions) of the development, and must do so having regard to any applicable State or national policies, programs or guidelines concerning greenhouse gas emissions.

(3) Without limiting subclause (1), in determining a development application for development for the purposes of mining, the consent authority must consider any certification by the Chief Executive of the Office of Environment and Heritage or the Director-General of the Department of Primary Industries that measures to mitigate or offset the biodiversity impact of the proposed development will be adequate."

The completed DPIE Scoping Worksheet has initially identified the relevant impacts and determined the level of consideration required by the proposal. The key issues identified will require further detailed assessment to determine the extent of impacts.

Clause 15 –Resource Recovery Clause 15 is in the following terms:

"15 Resource recovery

(1) Before granting consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider the efficiency or otherwise of the development in terms of resource recovery.

(2) Before granting consent for the development, the consent authority must consider whether or not the consent should be issued subject to conditions aimed at optimising the efficiency of resource recovery and the reuse or recycling of material.

(3) The consent authority may refuse to grant consent to development if it is not satisfied that the development will be carried out in such a way as to optimise the efficiency of recovery of minerals, petroleum or extractive materials and to minimise the creation of waste in association with the extraction, recovery or processing of minerals, petroleum or extractive materials."

The resource recovery efficiency and proposed end use is required to be addressed further and assessed in detail.

Clause 16 – Transport is in the following terms:

(1) Before granting consent for development for the purposes of mining or extractive industry that involves the transport of materials, the consent authority must consider whether or not the consent should be issued subject to conditions that do any one or more of the following–

- (a) require that some or all of the transport of materials in connection with the development is not to be by public road,*
- (b) limit or preclude truck movements, in connection with the development, that occur on roads in residential areas or on roads near to schools,*
- (c) require the preparation and implementation, in relation to the development, of a code of conduct relating to the transport of materials on public roads.*

(2) If the consent authority considers that the development involves the transport of materials on a public road, the consent authority must, within 7 days after receiving the development application, provide a copy of the application to–

- (a) each roads authority for the road, and*
- (b) the Roads and Traffic Authority (if it is not a roads authority for the road).*

Note. Section 7 of the Roads Act 1993 specifies who the roads authority is for different types of roads. Some roads have more than one roads authority.

(3) The consent authority–

- (a) must not determine the application until it has taken into consideration any submissions that it receives in response from any roads authority or the Roads and Traffic Authority within 21 days after they were provided with a copy of the application, and*
- (b) must provide them with a copy of the determination.*

(4) In circumstances where the consent authority is a roads authority for a public road to which subclause (2) applies, the references in subclauses (2) and (3) to a roads authority for that road do not include the consent authority.

The proposed haulage route has been designed to avoid nearby residential areas. Approvals from NSW RMS and TSC will be required in relation to the use of the public roads as part of the proposed extension. Further traffic impact assessment and engineering design will be required.

Part 4AA of the Policy relates to mining and petroleum development on Strategic Agricultural Land (SAL). As indicated on **Figure 10**, part of the subject land is mapped as BSAL.



Figure 10: Strategic Agricultural Land (Source: NSW Planning Portal)

While Part 4AA does not apply to 'Extractive Industries', land capability has been identified within the DPIE Scoping Worksheet as a Key Issue and as such it would be sensible to consult with the NSW Department of Primary Industries in relation to the implications of the SAL Mapping for any 'Extractive Industry'.

5.4.6 State Environmental Planning Policy (Primary Production and Rural Development) 2019

The subject land is mapped as rural land under the TLEP 2014 and the provisions of SEPP (Primary Production and Rural Development) are applicable. The aims of this policy are identified as follows:

3 Aims of Policy

The aims of this Policy are as follows—

- (a) to facilitate the orderly economic use and development of lands for primary production,*
- (b) to reduce land use conflict and sterilisation of rural land by balancing primary production, residential development and the protection of native vegetation, biodiversity and water resources,*
- (c) to identify State significant agricultural land for the purpose of ensuring the ongoing viability of agriculture on that land, having regard to social, economic and environmental considerations,*
- (d) to simplify the regulatory process for smaller-scale low risk artificial waterbodies, and routine maintenance of artificial water supply or drainage, in irrigation areas and districts, and for routine and emergency work in irrigation areas and districts,*
- (e) to encourage sustainable agriculture, including sustainable aquaculture,*
- (f) to require consideration of the effects of all proposed development in the State on oyster aquaculture,*
- (g) to identify aquaculture that is to be treated as designated development using a well-defined and concise development assessment regime based on environment risks associated with site and operational factors.*

The proposed extension to the existing 'Extractive Industry' does not contravene the aims of this policy allowing for the economic use of the land by utilizing the sand resource consistent with the relevant directions of the North Coast Regional Plan 2036, while not impeding future agricultural activities in the surrounding locality.

5.4.7 State Environmental Planning Policy (State and Regional Development) 2011

SEPP (State & Regional Development) 2011 applies to the state of NSW. The SEPP identifies development that is considered either State Significant or Regional Development.

Clause 8 of SEPP (State and Regional Development) 2011 identifies that certain developments are declared to be State Significant Development for the purposes of Section 4.36 of the EP&A Act 1979. A development is State Significant Development if it meets the following requirements:

- (a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and*
- (b) the development is specified in Schedule 1 or 2.*

The project meets the definition of 'Extractive Industry'. 'Extractive Industry' is permissible with consent on the site under both the TLEP 2014 and State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007. The proposal is not identified as exempt development, complying development, permissible without consent or prohibited development.

Under Schedule 1 of *State Environmental Planning Policy (State and Regional Development (2011))* development for the purpose of 'Extractive Industry' that meets any of the following is identified as State significant development (SSD).

- (a) extracts more than 500,000 tonnes of extractive materials per year, or*
- (b) extracts from a total resource (the subject of the development application) of more than 5 million tonnes, or*
- (c) extracts from an environmentally sensitive area of State significance.*

The project would extract 950,000 tonnes per annum from a total resource of between 30 and 35 million tonnes. The project meets both Schedule 1 Clause 7(1)(a) and (b) and is State Significant Development.

Schedule 7 of the SEPP (State & Regional Development) 2011 outlines development for which a Regional Planning Panel (RPP) exercises consent authority functions of council. As the proposal has been identified as State Significant Development within Schedule 1 the relevant triggers for regionally significant development are not applicable.

5.5 Designated Development

Schedule 3 of the *Environmental Planning and Assessment Regulations 2000* provides the criteria for development that is identified as designated development. Section 19 (1) of Schedule 3 identifies 'Extractive Industry' obtaining more than 30,000 cubic metres of 'Extractive Material' per year or disturbing more than 2 hectares of land is classified as Designated Development. The project with an extract of 950,000 tonnes per annum and greater than 2ha disturbance meets the relevant trigger to be identified as Designated Development.

5.6 Other approvals and licences

The following additional approvals and licenses will be required by the project.

Table 12: Approvals and Licenses required

Act	Provision	Approval	Comment
<i>Coal Mine Subsidence Compensation Act 2017</i>	s 22	approval to alter or erect improvements, or to subdivide land, within a mine subsidence district	N/A – The site is not in a Mine Subsidence District
<i>Fisheries Management Act 1994</i>	s 144	aquaculture permit	N/A – The proposal does not seek consent for Aquaculture
	s 201	permit to carry out dredging or reclamation work	N/A – The proposal does not involve dredging or reclamation work on public water land, waterfront land or a natural waterway.
	s 205	permit to cut, remove, damage or destroy marine vegetation on public water land or an aquaculture lease, or on the foreshore of any such land or lease	N/A – The proposal does not seek to remove, damage or destroy marine vegetation on public water land or an aquaculture lease, or on the foreshore of any such land or lease.
	s 219	permit to: (a) set a net, netting or other material, or (b) construct or alter a dam, floodgate, causeway or weir, or (c) otherwise create an obstruction, across or within a bay, inlet, river or creek, or across or around a flat	N/A – The proposal does not include any form of obstruction across or within a bay, inlet, river or creek, or across a flat
<i>Heritage Act 1977</i>	s 58	approval in respect of the doing or carrying out of an act, matter or thing referred to in s 57 (1)	N/A – The site does not contain an item listed on the State Heritage Register.
<i>Mining Act 1992</i>	ss 63, 64	grant of mining lease	N/A – The proposal is for an 'Extractive Industry' and will

			require a mining lease under the <i>Mining Act 1992</i> .
<i>National Parks and Wildlife Act 1974</i>	s 90	grant of Aboriginal heritage impact permit	TBC – AHIMS search has indicated that there is an item of cultural significance on the subject land. As a result, further research into the existence and significance of this item will be required. Pending these investigations, the need for an Aboriginal Heritage Impact Permit (or not) will be established.
<i>Petroleum (Onshore) Act 1991</i>	s 16	grant of production lease	N/A – The proposal does not seek a petroleum production lease
<i>Protection of the Environment Operations Act 1997</i>	ss 43 (a), 47 and 55	Environment protection licence to authorise carrying out of scheduled development work at any premises.	N/A – An Environmental Protection License will be required under Section 48 of the POEO Act 1997.
	ss 43 (b), 48 and 55	Environment protection licence to authorise carrying out of scheduled activities at any premises (excluding any activity described as a “waste activity” but including any activity described as a “waste facility”).	APPLICABLE – The proposed development involves a scheduled activity and will require an Environmental Protection License (EPL).
	ss 43 (d), 55 and 122	Environment protection licences to control carrying out of non-scheduled activities for the purposes of regulating water pollution resulting from the activity.	N/A – An Environmental Protection License will be required under Section 48 of the POEO Act 1997.
<i>Roads Act 1993</i>	s 138	consent to: (a) erect a structure or carry out a work in, on or over a public road, or (b) dig up or disturb the surface of a public road, or (c) remove or interfere with a structure, work or tree on a public road, or (d) pump water into a public road from any land adjoining the road, or (e) connect a road (whether public or private) to a classified road	APPLICABLE – The proposal relates to works within a public road and approval by both RMS and TSC will be required.
<i>Rural Fires Act 1997</i>	s 100B	authorisation under section 100B in respect of bush fire safety of subdivision of land that could lawfully be used for residential or	N/A – The site is mapped as bushfire prone land however the proposal does not trigger

		rural residential purposes or development of land for special fire protection purposes	referral to the RFS under s100B of the Rural Fires Act 1997.
<i>Water Management Act 2000</i>	ss 89, 90, 91	water use approval, water management work approval or activity approval under Part 3 of Chapter 3	APPLICABLE – The subject land is not mapped within 40m of a waterway and as a result no controlled activity approval is required. However, the proposal involves aquifer interference activities and therefore an interference license will be required.

6.0 Consultation

6.1 Scoping Consultation

As part of project scoping the following consultation has occurred:

- Pre-Scoping Meeting with DPIE – 16th August 2019
- Pre-Scoping Meeting with RMS – 23rd September 2019
- Pre-Scoping Commentary from TSC – 1st November 2019
- Pre-Scoping Meeting with EPA – 21st October.

With exception of the discussions with the EPA, formal minutes or correspondence was either prepared or received. For reference refer Attachment 10, Attachment 11 and Attachment 12 for copies of consultation minutes or correspondence from the DPIE, RMS and TSC respectively.

6.2 Project Consultation

Stakeholder engagement and ongoing project consultation will be required after receipt of SEAR's. Steve MacRae Development Services Pty Ltd (SMDS) with the assistance of Zone Planning Group have been engaged as part of the project team to undertake community and stakeholder consultation for the project. A separate Consultation Scoping and Methodology Report for this consultation has been prepared and is included under Attachment 13.

The Consultation Scoping and Methodology Report outlines the project's strategy as to which entities should be consulted, why they should be consulted, and the method of consultation to be undertaken.

7.0 Key & Other Issues for Inclusion in EIS

As part of project scoping, the DPIE scoping worksheet has been completed. In accordance with the results of the DPIE scoping worksheet, the following issues have been identified as Key, Other or Scoping Issues. A copy of the completed DPIE scoping worksheet is provided under Attachment 09.

7.1 Key Issues

7.1.1 Acoustics

Noise Impact was identified as a Key Issue that would also require focused engagement. Consistent with current operations, extraction will occur via dredge unit that will change location throughout the phases of operation. The proposal would also result in additional heavy vehicle movements and loading of vehicles. All these activities may be heard at nearby dwellings subject to prevailing conditions and in particular S/SE winds that prevail.

A Noise Impact Assessment would be prepared to assess all noise generating activities and ensure noise levels can achieve compliance with relevant legislative requirements. Reference is made to the significantly higher noise limits permitted on the Cudgen Lakes sand operations immediately to the east of the site.

7.1.2 Visual

Visual Impact was identified as a Key Issue that would also require focused engagement and consideration of cumulative impact. The proposed dredging operations will progressively alter the landscape from a predominately agricultural vista (cattle grazing with some tea tree) to rehabilitated waterbodies and future recreational/educational facilities. The project would be visible from nearby houses, vehicles using the Pacific Highway and from a range of key vantage points in the broader surrounding area. The expansion will significantly increase the size of the lake and increase its visibility to the surrounding rural residences to the south of the site.

In order to understand and mitigate the potential visual impacts to surrounding areas, a Visual Impact Assessment would be prepared as part of project development. A Visual Impact Methodology and Scoping Report has been prepared and is included under Attachment 14.

Within the scoping consultation received from TSC (Attachment 12), it has been identified that the Visual Impact Assessment should include Major Project SSD17-8471 in the cumulative impact considerations. SEAR's have a validity period of 2 years. The SEAR's for SSD17-8471 were issued in June 2017 and as such are no longer valid. As the SEAR's are no longer valid and nothing further has been submitted to DPIE for assessment; for all intents and purposes SSD17-8471 is considered not to be proceeding. As such consideration of SSD17-8471 has not been included in the proposed Visual Impact Assessment Methodology and Scoping Report nor has it been further discussed in this scoping report.

7.1.3 Light Spill

Light Spill was identified as a Key Issue that would also require focused engagement. As the proposed operation will increase to 24 hours 7 days a week, the project site will be lit throughout the night. As the site and surrounding areas are relatively flat, this lighting may be seen by nearby dwellings, vehicles using the Pacific Highway and a range of key vantage points in the broader surrounding area. Detailed lighting design and further investigations would be prepared as part of project development.

7.1.4 Road and Rail Network

Road and Rail Network was identified as a Key Issue that would also require focused engagement and consideration of cumulative impact. Existing HTSP operations access via Altona Road with the haulage route along Tweed Coast Road and entering the Pacific Motorway at the Chinderah interchange. The project would see a new operations and haulage access via the Tweed Valley Way and Pacific Highway Interchange to the west.

The proposed 24/7 access to the interchange by predominately heavy vehicles would alter traffic conditions and as a result, road users could be affected. RMS have been consulted with and have provided comments in relation to the preliminary options for access to the site. These comments are included under Attachment 11.

To address the proposed alternative access arrangements a Traffic Impact Assessment would be prepared as part of project development. A Traffic Impact & Access Methodology and Scoping Report has been prepared and is included under Attachment 15.

7.1.5 Services & Facilities

Services & Facilities was identified as a Key Issue that would require focused engagement. This issue is focused wholly on project end use. The project end use will provide additional a public access multipurpose facility for the use of the broader community. Final ownership, maintenance responsibility and funding will be determined through ongoing investigation and consultation. Research into the service requirements of the facility and potential ownership will be provided.

A preliminary end use concept is included under Attachment 02.

7.1.6 Soil Chemistry (ASS)

Acid Sulfate Soils was identified as a Key Issue. As indicated on **Figure 11** below, the site is mapped as having Class 2, 3 and 5 Acid Sulfate Soils. Clause 7.1 of the TLEP 2014 requires any proposal involving excavation below natural ground level (on Class 2 land), and more than 1m below natural ground level (Class 3 land) to be accompanied by an Acid Sulfate Soil Management Plan.

The existing operations on the site employ effective management measures for acid sulfate soils, including re-interring fine materials at depth within the lakes. It is anticipated that these measures will continue to be utilised. As part of project development further Acid Sulfate Soils investigation would be undertaken.

A Key Environmental Issues Scoping & Methodology Report is included under Attachment 16. It is proposed the Acid Sulfate Soils investigation would be undertaken in accordance with the methodology included within this report.

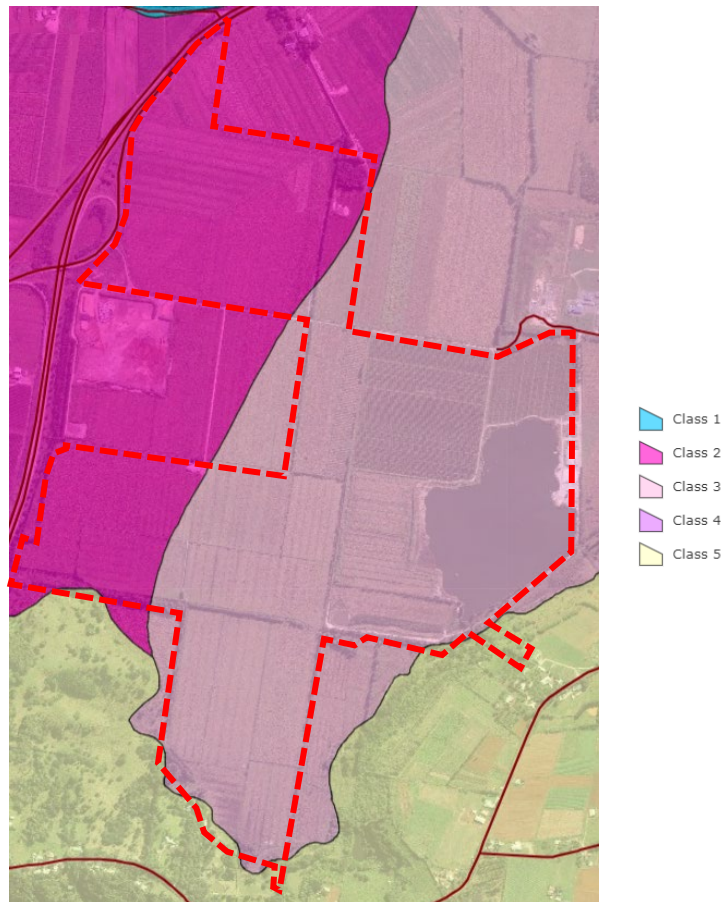


Figure 11: Acid Sulfate Soils Mapping (Source: TSC)

7.1.7 Capability (Agricultural)

Land Capability (Agricultural) was identified as a Key Issue that would require focused engagement. As illustrated within **Figure 12** and **Figure 13**, the site is mapped as regionally significant farmland and as land suitable for grazing or land well suited to pasture improvement. Currently, the site is used for 'Extractive Industry', livestock grazing and some tea tree cultivation. The project would result in a material change to the land, creating a lake or series of lakes that alter the number and range of land uses that can be applied to the site.

A land capability assessment and investigations into the agricultural values of the land would be provided to confirm the current agriculture value of the land and the extent of impact that may result from the project. A Key Environmental Issues Scoping & Methodology Report is included under Attachment 16. It is proposed the land capability assessment would be undertaken in accordance with the methodology included within this report.

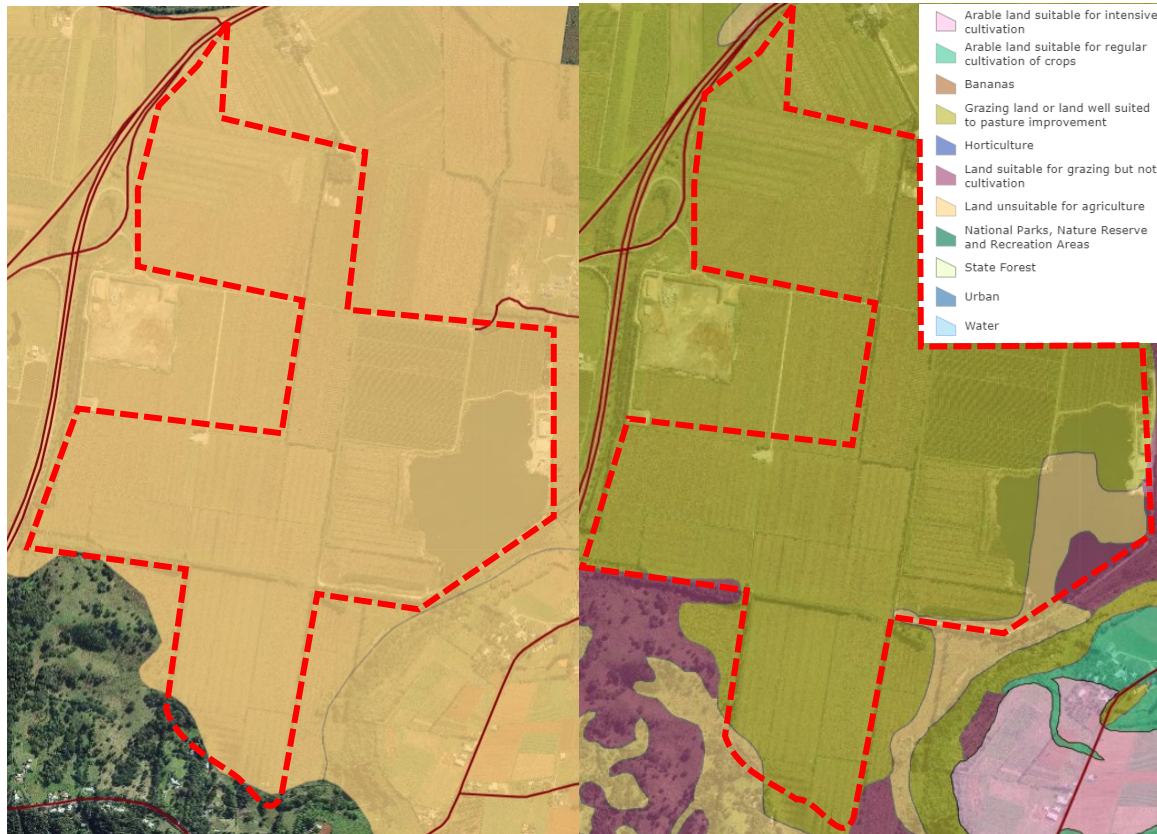


Figure 12: Agricultural Land Suitability
(Source: Tweed Shire Council)

Figure 13: Farmland Protection Project
(Source: Tweed Shire Council)

7.1.8 Contamination

Contamination was identified as a Key Issue. While there is no known contamination on the site, without appropriate investigation a risk of contaminated land exposure exists. The site has previously been used for livestock grazing and sugar cane production. To discharge the project's obligations under State Environmental Planning Policy No.55, at minimum a preliminary site investigation would be undertaken.

A Key Environmental Issues Scoping & Methodology Report is included under Attachment 16. It is proposed the contamination investigations would be undertaken in accordance with the methodology included within this report.

7.1.9 Water Quality

The project will involve the expansion of the existing extraction lake through the progressive extraction of sands. The project has the potential to impact local groundwater quality and the surface water quality within the extraction lake itself. Existing operations of the site employ effective management measures that limit the potential for groundwater impacts whilst maintaining acceptable water quality within the extraction lake. These measures will continue to be utilised.

A Key Environmental Issues Scoping & Methodology Report is included under Attachment 16. It is proposed the water quality assessment would be undertaken in accordance with the methodology included within this report.

7.1.10 Water Availability

Water Availability was identified as a Key Issue that would also require focused engagement. The project does not rely upon processes that require or utilise significant amounts of water. However, the lakes created by the project will form a 'groundwater window' that will lead to evaporative losses from the lakes surface. These losses would be quantified as part of the site water balance included in the proposed methodology for surface and groundwater assessments.

A Key Environmental Issues Scoping & Methodology Report is included under Attachment 16. It is proposed the water balance assessment would be undertaken in accordance with the methodology included within this report.

7.1.11 Hydrological Flows

Hydrological Flows were identified as a Key Issue that would also require focused engagement. The site contains two primary cane drains, one that traverses north south along the edge of Lot 22 DP1082435 and bends across to run along the boundary of Lot 2 DP1192506 / Lot 1 DP1192506, crossing through Lot 51 DP1166990 into land not part of the proposal; and a second running east west along the edge of Lot 3 DP1243752 and through the south western corner of Lot 1 DP1250570 crossing into the Pacific Highway Road Reserve. These drains play a part in existing site drainage and may be under partial tidal influence.

Subject to ultimate pond design these drains may either be diverted or absorbed as part of the project. These drains would be assessed as part of the proposed methodologies for the surface and groundwater assessments.

A Key Environmental Issues Scoping & Methodology Report is included under Attachment 16. It is proposed the surface and ground water assessments would be undertaken in accordance with the methodology included within this report.

7.1.12 Flood Waters

Flood Waters was identified as a Key Issue that would also require focused engagement. The subject site is mapped as being flood prone land with a Design Flood Level of 3.2m AHD and a Probable Maximum Flood Level of 8.1m AHD. In addition to this, small parts of the site are mapped as being within the High Flow area as seen in **Figure 14**.



Figure 14: High Flow maps of the subject site (Source: Tweed Shire Council)

Upgrades to the Pacific Highway / Tweed Valley Way interchange to facilitate access are considered to pose the greatest constraint to flood hydraulics and there is the potential for impact (increased water level) to the Pacific Highway and surrounding properties.

A Hydraulic Impact Assessment (HIA) would be undertaken as part of detailed project development. It proposed the HIA would:

- Obtain and interrogate Council flood models, if available;
- Prepare a TUFLOW model for the existing condition, extracting boundary conditions and inflows directly from Council's model;
 - If no council model is available, a Hydrology model will be developed for the entire contributing catchment, to establish inflows into the TUFLOW model;
- Prepare a TUFLOW model for the proposed development condition, this model will be based on the existing condition model mentioned above with adjusted topography, roughness and hydrology where required to represent the developed condition;
- Provide modelling of the 2, 5, 10, 20, 50 and 100 year ARI storm events for the critical duration of the catchment for both the existing and the proposed development conditions;
- Provide interpretation and interrogation of model results, to assess whether the proposed development causes any actionable impacts;
- Assess all results in line with the relevant Council codes and guidelines; and

7.2 Other Issues

7.2.1 Particulate Matter

Particulate Matter was identified as an 'Other Issue' that would also require focused engagement. It is anticipated that the proposal could result in additional dust from initial overburden stripping and haulage operations. This dust could be received at sensitive receptors without appropriate mitigation measures. Suitable methods for dust suppression would be implemented. An Air Quality Impact Assessment would be prepared as part of project development.

A Key Environmental Issues Scoping & Methodology Report is included under Attachment 16. It is proposed that Air Quality Impact Assessment would be undertaken in accordance with the methodology included within this report.

7.2.2 Ownership

Land Ownership was identified as an 'Other Issue' that would also require focused engagement. The site encompasses a piece of unformed road reserve that is located between Lot 22 DP1082435, Lot 1 DP1250570 and Lot 2 DP1192506. This road reserve is understood to be vested to and under the control of Tweed Shire Council. If site operations are to encompass this piece of land, a road closure and purchase of the land would be required.

7.3 Scoping Only

7.3.1 Access to Property

Access to property has been identified as a 'Scoping Only' Issue. With exception of the access to the ABLP Facility, the project will have no interaction with existing property access to surrounding properties. The project will see a new operations and haulage access via the Tweed Valley Way Pacific Highway Interchange. The use of this access and the needs of the ABLP Facility will be accommodated to ensure appropriate and ongoing property access.

As aforementioned, the proposal will require a Traffic Impact Assessment to be provided to support the proposal and demonstrate that the proposed access points will be adequate to cater for the project.

7.3.2 Utilities

Utilities has been identified as a 'Scoping Only' Issue. As part of detailed project design all services (public and private) will be located and appropriately buffered or avoided to ensure that they can be catered for and access to same maintained.

7.3.3 Public Infrastructure

Public Infrastructure has been identified as a 'Scoping Only' Issue. As part of project design all services (public and private), including access will be located and appropriately buffered / avoided. Any anticipated issues with public infrastructure are to be avoided by project design.

7.3.4 Aboriginal Cultural Heritage

Aboriginal Cultural Heritage has been identified as a 'Scoping Only' Issue. Review of Tweed Aboriginal Cultural Heritage Management Plan 2018 mapping indicates a known place of Aboriginal Cultural Heritage Significance within the existing approved Phase 1 to 4 of the extraction lake. Refer Figure 15.

Furthermore, Basic Aboriginal Heritage Information Management System (AHIMS) searches across the subject allotments also identify one Aboriginal site recorded on or near Lot 22 DP1082435. The Tweed Aboriginal Cultural Heritage Management Plan 2018 mapping and basic AHIMS searches do not identify any other known items of Aboriginal Cultural Heritage upon the site.

As the site includes mapped areas of cultural significance, the Tweed Byron Local Aboriginal Land Council will be consulted with and an Aboriginal Cultural Heritage Due Diligence Assessment will be undertaken to ground truth the Tweed Aboriginal Cultural Heritage Management Plan 2018 mapping and AHIMS search results.



Figure 15: Tweed Aboriginal Cultural Heritage Management Plan 2018
(Source: Tweed Shire Council)

7.3.5 Opportunity Cost

Opportunity Cost has been identified as a 'Scoping Only' Issue. The type and quality of the material available onsite is a key sand resource for Northern New South Wales / South East Queensland Region. Furthermore, the need to facilitate access to such resources is identified within the directions of the North Coast Regional Plan 2036. The use of the resource is not expected to result in unacceptable opportunity cost and is anticipated to generate an overall benefit catering to Northern NSW and South East QLD regions.

7.3.6 Atmospheric emissions

Atmospheric emissions have been identified as a 'Scoping Only' Issue. The proposed additional emissions as a result of the extension project will be limited to small scale diesel generator (dredge) and truck exhaust emissions. All equipment will be maintained to the relevant standards to ensure emissions compliance. Further to this, it is anticipated that over time through technology advances, the required project emissions are likely to reduce providing for improved air quality to the surrounding area.

An Air Quality Impact Assessment would be prepared as part of project development. A Key Environmental Issues Scoping & Methodology Report is included under Attachment 16. It is proposed that Air Quality Impact Assessment would be undertaken in accordance with the methodology included within this report.

7.3.7 Native vegetation

Native vegetation has been identified as a 'Scoping Only' Issue. The site has limited existing vegetation and is predominately grasslands used for livestock grazing. In accordance with Council's 2009 Vegetation Management Mapping identified below in **Figure 16**, the site is predominantly highly modified/ disturbed land with a very small portion to the north east being melaleuca and swamp she-oak forests. Limited vegetation is present along a number of cane drains on the property.

While limited vegetation is present onsite an Ecological Assessment would be undertaken to ground truth ecological values and discharge all relevant obligations under associated legislation.



Figure 16: Vegetation Management Plan 2009 (Source: Tweed Shire Council)

A Key Environmental Issues Scoping & Methodology Report is included under Attachment 16. It is proposed that Ecological Assessment would be undertaken in accordance with the methodology included within this report.

7.3.8 Native Fauna

Native fauna has been identified as a 'Scoping Only' Issue. As the site has limited vegetation it is anticipated that it will have limited habitat potential. However, as aforementioned an Ecological assessment would be undertaken to address potential impacts on both vegetation and fauna impacts as a result of the project.

A Key Environmental Issues Scoping & Methodology Report is included under Attachment 16. It is proposed that the Ecological Assessment would be undertaken in accordance with the methodology included within this report.

7.3.9 Bushfire

Bushfire has been identified as a 'Scoping Only' Issue. Both areas surrounding the site and the peripheries of the site itself are mapped as bushfire prone land, refer **Figure 17**. However, the extent of bushfire prone land relative to the size of the site is negligible and the hazardous vegetation is significantly removed from the proposed area of extraction and site plant and buildings. As a result, it is anticipated that the extent of bushfire threat is minor and will not have an impact upon the project.



Figure 17: Mapped Bushfire Prone Land (Source: Tweed Shire Council)

7.3.10 Stability and/or structure

Stability and / or structure has been identified as a 'Scoping Only' Issue. This issue is primarily focused on lake bank stability. This issue will be avoided through project and more specific lake design. Final lake shape and batters will be subject to detailed analysis and engineering design.