



Proposed Gas Pipeline Project (MOD1)

Geotechnical - creek bank stability, contamination and acid sulfate soil assessment

Manildra Group

2 July 2021

→ **The Power of Commitment**



GHD Pty Ltd | ABN 39 008 488 373

Crown Tower, Level 11, 200 Crown Street

Wollongong, New South Wales 2500, Australia

T 61-2-4222 2300 | **F** 4222 2301 | **E** wolmail@ghd.com | **ghd.com**

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Project manager	Colee Quayle
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Executive summary

Manildra Group Pty Ltd (Manildra) was previously granted project approval for Concept Plan (MP10_0144) and Project Application (MP_10_0108) for the Shoalhaven Starches Gas Pipeline Project in 2012 by the Independent Planning Commission. GHD Pty Ltd (GHD) understand Manildra intend to undertake the modifications to the existing approval for the Gas Pressure Reduction Facility (GPRF). The modifications include relocation of the pressure reduction station within the proposed packing plant site and realign the proposed gas pipeline route so that it follows the north-eastern side boundary of the packing plant site and then the riparian corridor adjacent to Abernethy's Creek.

Manildra has commissioned GHD Pty Ltd (GHD) to carry out a geotechnical assessment of the effects of the gas pipeline construction on the stability of the nearest bank of Abernethy's Creek; and acid sulfate soil (ASS) and contamination assessments at the site to support the modified application.

The assessment objectives were to:

- **Geotechnical:**
 - Provide geotechnical advice on the anticipated ground conditions with respect to the proposed development works.
 - Provide geotechnical advice in relation to the proximity of the proposed pipeline to Abernethy's Creek and potential effects of the proposed modifications to the pipeline on the stability of the creek bank.
- **Preliminary Site Investigation (PSI) for contamination:**
 - Assess the likelihood for contamination to exist on the site from past or present activities and provide recommendations for further investigation and/or options management (if applicable) with respect to the proposed development based on the findings of the assessment.
- **Preliminary ASS assessment:**
 - Provide a preliminary ASS assessment of the potential for acid sulfate soils to be present in the area of the proposed works within the anticipated depth of disturbance with recommendations on the need for management.

The scope of work developed to meet these objectives included a desktop study of site history and review of previous investigation reports, site walkover, interpretation of results and make conclusions and recommendations in relation to the above objectives.

Based on the previous and current investigation results, the assessment concluded:

Geotechnical

The objective of the geotechnical assessment was to advise on the effects of a trench excavation in relation to the construction of gas pipeline on the stability of the western bank of Abernethy's Creek. This assessment has shown that the factor of safety in respect to the stability of the creek bank, following excavation of 1 m deep trench for the gas pipeline construction, in conjunction with the rail and Packing Plant development described in Section 7.3 of this report, is acceptable for the long-term condition, and therefore will not influence the stability of the western bank of Abernethy's Creek.

Other geotechnical aspects relating to the gas pipeline alignment that should be considered in the design, construction and ongoing operation of the Packing Plant and associated infrastructure include:

- The extent of settlement over the rail siding and adjacent land, and the gas pipeline alignment, including long term settlement and differential settlement.
- It is assumed any construction related load will be limited to 20 kPa applied within the road perimeter. Any additional construction load that may be placed upslope or downslope of the gas pipeline alignment will have to be analysed (i.e., cranes, stockpiles of excavated materials).

Increased loading over the ground surface, ground disturbances or changes in the site surface profile between the proposed packing plant development area and Abernethy's Creek may adversely influence settlement and local and /or general stability.

The results of the Geotechnical Assessment are discussed in Section 7 of this report.

Contamination

Site history information indicated that prior to 1950, the site and surrounding areas were possibly used for rural land use. In 2008, horses were agisted within the grass paddocks. Apart from a possible farmhouse, structures immediately west of Abernethy's Creek, installation of the sewer main in the 1960's and sewer pump station, the site and surrounding areas remained generally undeveloped until 2012. From 2012, fill was progressively imported to the site and surrounding areas, initially for the construction of a gravel hardstand carpark, then for the proposed packing plant between 2018 and 2021. The fill imported to the site comprised road base gravel, latite drainage gravel and clay with shale and gravel. The road base and drainage gravel were sourced from local quarries, whilst the clay was sourced from the Nowra Gaol development site. The imported fill was assessed and classified as Virgin Excavated Natural Material (VENM).

Previous investigations did not identify soil contamination at the site that exceeded commercial / industrial assessment criteria (NEPC, 2013). For groundwater, lead and zinc concentrations exceeded the adopted assessment criteria (ANZECC/ARMCANZ, 2000). The source of zinc and lead was not identified but could have been associated with background concentrations. Faecal coliform concentrations were below the reporting limit suggesting leaks from the sewer main were not occurring in the vicinity of the groundwater monitoring well. It was concluded that the heavy metal impacts were not significant and did not warrant further investigation (ES, 2016).

In 2016, a site audit for the proposed packing plant development site was required to satisfy condition 20 of the consent issued by the NSW Minister for Planning and was therefore a statutory audit under the CLM Act 1997. The SAR concluded that based on the results of previous investigation and subsequent remediation and validation of TRH and asbestos impacts that were identified west of the current investigation area (i.e., CTP28 – off-site), that the packing plant development site, which includes the current investigation site, was suitable for commercial / industrial land use.

Based on previous and current investigation results, potential for contamination was identified in three areas of environmental concern (AECs), which included:

- AEC 1: Potential weathering of hazardous building materials and demolition of site structures, and possible storage and use of chemicals (e.g., fuels, oils, pesticides).
- AEC 2: Fill of unknown quality and origin.
- AEC 3: Leaks from sewer line and nearby sewage treatment plant. Potential asbestos used in sewer main pipe and historical damage.

Based on review of the potential source-pathway-receptor (SPR) linkages, the proposed development and future site works may provide direct contact / inhalation (i.e., vapours, dust) exposure opportunities for human and ecological receptors to contamination, if present within these AECs. Based previous and current investigation results, the likelihood for contamination to exist at the site is assessed as low. Therefore, due to the likely absence of contamination at the site, the SPR linkages are considered incomplete. No further investigation is warranted.

Although the likelihood for contamination was assessed as low, it is recommended that a Construction Environmental Management Plan (CEMP) be prepared to manage the occurrence of potential contamination, buried waste, demolition waste, ACM, etc. in all parts of the site during construction. The CEMP should also include an Unexpected Finds Protocol (UFP).

Acid sulfate soil

Based on previous investigation results, ASS are likely to be encountered within the proposed packing plant site, particularly the lower lying areas, in the north and east. Soft to very soft soils were encountered approximately 15 m west of Abernethy's Creek, to depths between 4.0 m and 9.8 m bgl. The clays were estuarine and described as dark grey high plasticity with silts, sands and shell fragments. The eastern and north-eastern portion of the proposed gas pipeline passes through these soft soil areas and likely to intercept ASS, and groundwater.

An acid sulfate soil management plan (ASSMP) should be prepared to appropriately manage the disturbance of ASS and mitigating potential acid generation and impacts to groundwater and adjacent waterbodies.

This report is subject to, and must be read in conjunction with, the limitations set out in Section 1.5 and the assumptions and qualifications contained throughout the Report.

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Abbreviations and definitions

Abbreviation	Definition
ACM	Asbestos containing material
AEC	Area of environmental concern
ANZECC	Australian and New Zealand Environment and Conservation Council
ANZG	Australian and New Zealand Guideline
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ASS	Acid sulfate soils
ASSMP	Acid sulfate soil management plan
BTEXN	Benzene, toluene, ethyl benzene and xylenes plus naphthalene
CEMP	Construction Environmental Management Plan
CLM Act	Contaminated Land Management Act 1997 (incorporating amendments made by the Contaminated Land Management Amendment Act 2003)
COPC	Contaminant of potential concern
CSM	Conceptual Site Model
DP	Deposited Plan
DPIE	Department of Planning, Industry and Environment
DSI	Detailed Site Investigation
EIL	Ecological Investigation Level
ENM	Excavated Natural Material
EPL	Environmental Protection Licence
ESL	Ecological Screening Level
FoS	Factor of safety
<	Less than (laboratory reporting limit)
GHD	GHD Pty Ltd
GPRF	Gas Pressure Reduction Facility
Ha	Hectare
HIL	Health Investigation Level (relating to defined land use scenario)
HSL	Health Screening Levels
LOR	Limit of reporting
mAHD	Elevation in metres from Australian Height Datum
mbgl	Metres below ground level
mg/kg	Milligrams per kilogram
NATA	National Association of Testing Authorities of Australia
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NSW EPA	New South Wales Environmental Protection Authority
OEH	Office of Environment and Heritage
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated Biphenyl
pH	-log[H]

Abbreviation	Definition
PID	Photoionisation detector
ppm	Parts per million
PSI	Preliminary Site Investigation
RAP	Remediation Action Plan
SPR	Source Pathway Receptor
SWL	Standing water level
TEQ	Toxicity Equivalence Quotient
TPH	Total petroleum hydrocarbons
TRH	Total recoverable hydrocarbons
UCL	Upper Confidence Limit
UFP	Unexpected Find Protocol
ug/L	Micrograms per litre
VENM	Virgin Excavated Natural Material
VOC	Volatile Organic Compound
WHSE	Work Health Safety and Environment

1. Introduction

1.1 General

Manildra Group Pty Ltd (Manildra) was previously granted project approval for Concept Plan (MP10_0144) and Project Application (MP_10_0108) for the Shoalhaven Starches Gas Pipeline Project in 2012 by the Independent Planning Commission.

GHD Pty Ltd (GHD) understand Manildra intend to undertake the modifications to the existing approval. The proposed development modification to the existing approval is discussed in Section 2 and the site location is shown in Figure 1, Appendix B.

Manildra has commissioned GHD Pty Ltd (GHD) to carry out a geotechnical assessment of the effects of the gas pipeline construction on the stability of the nearest bank of Abernethy's Creek; and acid sulfate soil (ASS) and contamination assessments at the site to support the modified application.

These assessments have been carried out in general accordance with GHD's proposal ref: 12548413-73485-12, dated 9 April 2021.

1.2 Purpose of this report

The purpose of this report is to document the findings of the assessment, which will support the Modification Application and address anticipated requirements from the Department of Planning, Industry and Environment (DPIE). The requirements anticipate for the Modification Application are listed in a letter from Cowman Stoddart Pty Ltd (letter reference: MP06_0228, dated 26 March 2021, pp. 8-10).

1.3 Objectives

GHD understand the assessment objectives were to:

- **Geotechnical:**
 - Provide geotechnical advice on the anticipated ground conditions with respect to the proposed development works.
 - Provide geotechnical advice in relation to the proximity of the proposed pipeline to Abernethy's Creek and potential effects of the proposed modifications to the pipeline on the stability of the creek bank.
- **Preliminary Site Investigation (PSI) for contamination:**
 - Assess the likelihood for contamination to exist on the site from past or present activities and provide recommendations for further investigation and/or options management (if applicable) with respect to the proposed development based on the findings of the assessment.
- **Preliminary ASS assessment:**
 - Provide a preliminary ASS assessment of the potential for acid sulfate soils to be present in the area of the proposed works within the anticipated depth of disturbance with recommendations on the need for management.

1.4 Scope of work

The scope of work for this assessment comprised the following:

- Desktop study including a review of existing subsurface information in the vicinity of the proposed structures.
- Review previous reporting/advice by Coffey, SMEC and GHD on geotechnical, contamination and ASS assessments in the plant area.
- Site visit and observations by Contaminated Land and Geotechnical Technical Directors from GHD to visually assess potential sources of contamination, proximity of structures to the western bank of Abernethy's Creek, the general condition of the creek bank, observe surrounding land uses, topography, drainage, nearby sensitive environments to confirm the findings from previous reports and assess any major changes to site conditions since our last report.
- Report on desktop review, drawing upon information within recent reports prepared adjacent to the proposed development areas, site observations and recommendations in accordance with the objectives outlined above.

1.5 Limitations

This report: has been prepared by GHD for Manildra Group and may only be used and relied on by Manildra Group for the purpose agreed between GHD and Manildra Group as set out in Section 1 of this report.

GHD otherwise disclaims responsibility to any person other than Manildra Group arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

Site conditions (including the presence of hazardous substances and/or site contamination) may change after the date of this Report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change.

GHD has prepared this report on the basis of information provided by Manildra Group and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

This report is to be read in conjunction with document titled "General Notes" (Ref: DS5.5.1 Issue 0 Date: 05/10/2018), located in Appendix A of this report.

2. Proposed development

Manildra intend to undertake the following modifications to the existing approval:

- To relocate the approved location of the Gas Pressure Reduction Facility (GPRF) within the approved Packing Plant site, from a position to the north-east of the proposed packing plant building, south towards the Bolong Road frontage; and
- To alter the diameter of the pipeline which will result in an increase in the diameter of the pipeline from DN 150 to DN 300. The latest site plan also shows the gas pipeline re-aligned to the position shown in red in Figure 2-1 below, following the north-eastern side boundary of the packing plant site and then the riparian corridor adjacent to Abernethy's Creek.

The proposed changes under Modification Application (Modification 1) are indicated by red polygons (except for the red dashed lines) and labels in Figure 2-1 below, as provided by Cowman Stoddart. The red dashed lines represent the proposed gas pipeline that forms part of the proposed Co-Gen Plant (MOD23). Detailed drawings of the proposed development are included in Appendix C.

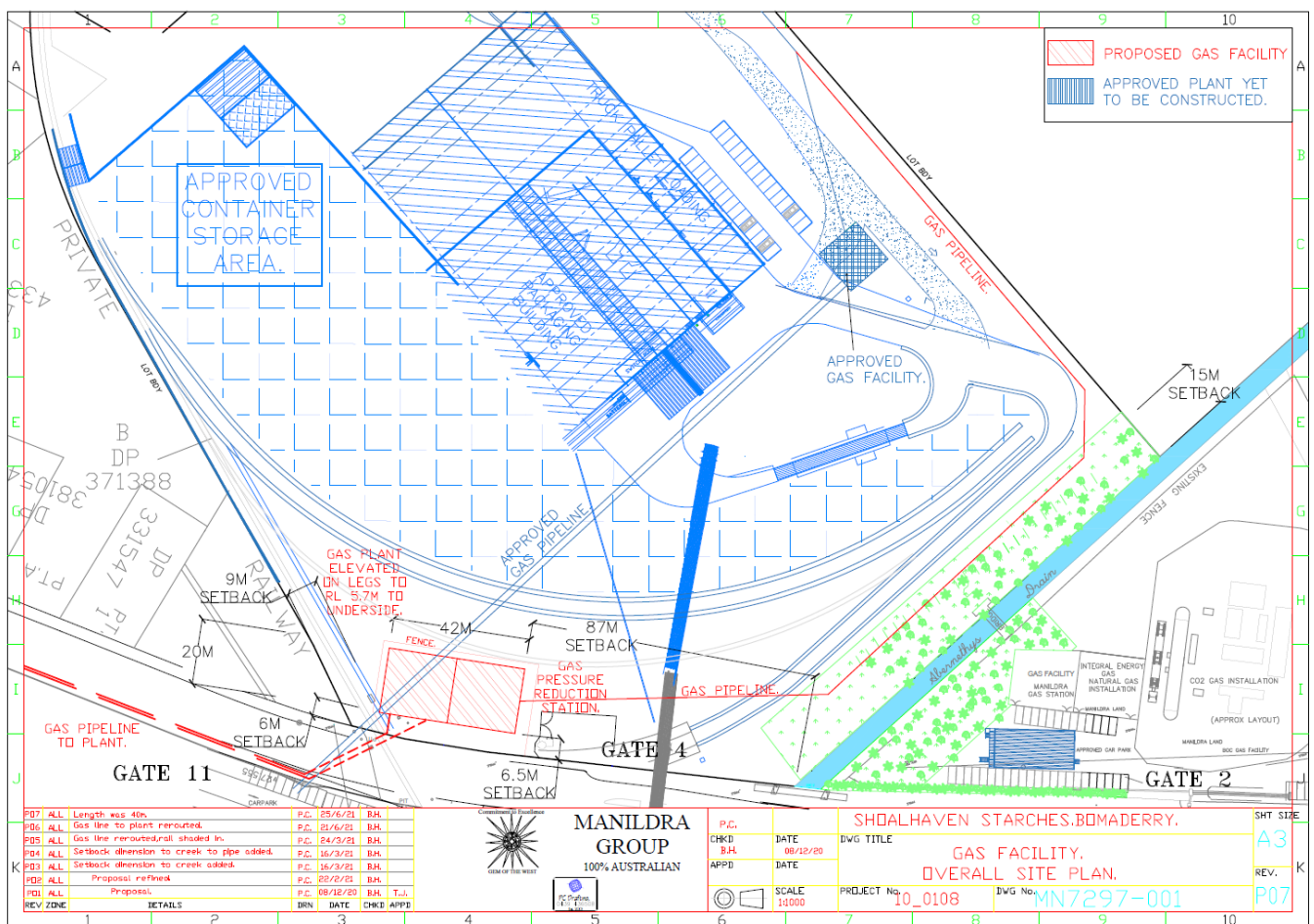


Figure 2-1 Shoalhaven Starches overall site plan showing proposed modifications (in red) except for pipeline in Bolong Road indicated by the dashed red line (Ref: Project 10_0108, DWG No. MN7297-001, dated 25/6/2021)

3. Site setting

3.1 Site identification

The development modifications marked in red on Figure 2-1 defines the site. Site identification details are summarised in Table 3.1.

Table 3.1 Summary of site details

Identification item	Detail
Site address:	No. 36 Railway Street, Bomaderry, NSW and Bolong Road (and road reserve)
Site area	As shown in Figure 2-1.
Site identification	– Lot 2 DP538289 – Lot 16 DP1121337
Current zoning	IN1 – General industrial under the Shoalhaven City Council Local Environment Plan (LEP) 2014 (LEP, 2014)
Current land use	Filling for the proposed packing plant and carpark
Surrounding land use	– The proposed development area adjoins the proposed packing plant site which is generally located west of the gas pipeline alignment. A railway line, operated by Manildra, also exists near the south-western side of the gas facility. Beyond the railway line are light industrial businesses. – To the north is the Shoalhaven Water sewerage treatment plant – To the south is Bolong Road and Shoalhaven Starches Plant – To the east is Abernethy's Creek. East of the creek is the carbon dioxide production and storage plant.

3.2 Topography and drainage

Google Earth indicates that the sites for the gas pipeline and pressure reduction station have an elevation between 2 m and 4 m above Australian Height Datum (AHD). The sites and surrounding areas form part of an alluvial plain. Ground elevation has been raised by approximately 2 m in areas immediately west of the pipeline site where it is aligned parallel to the creek. The ground has been recently filled as part of the initial phase of the proposed packing plant development (Photo 1 and Photo 2).

The closest waterbody relative to the site is Abernethy's Creek located approximately 15 m east of the proposed gas pipeline route, which is the closest point to the creek. A sediment pond was constructed in April 2020 as part of the filling activities associated with the packing plant (Photo 3). Surface water runoff is directed into the sediment pond and Abernethy's Creek.

Minor flooding was observed during a site visit on 24 March 2021 along the eastern and northern sections of the gas pipeline route. The flooding was associated with a heavy rainfall event where 250 mm of rain fell between 14 and 23 March 2021 (recorded at weather station: Nowra Boat Shed (Shoalhaven River), Station No. 68213, located approximately 1.7 km south-west of the site).

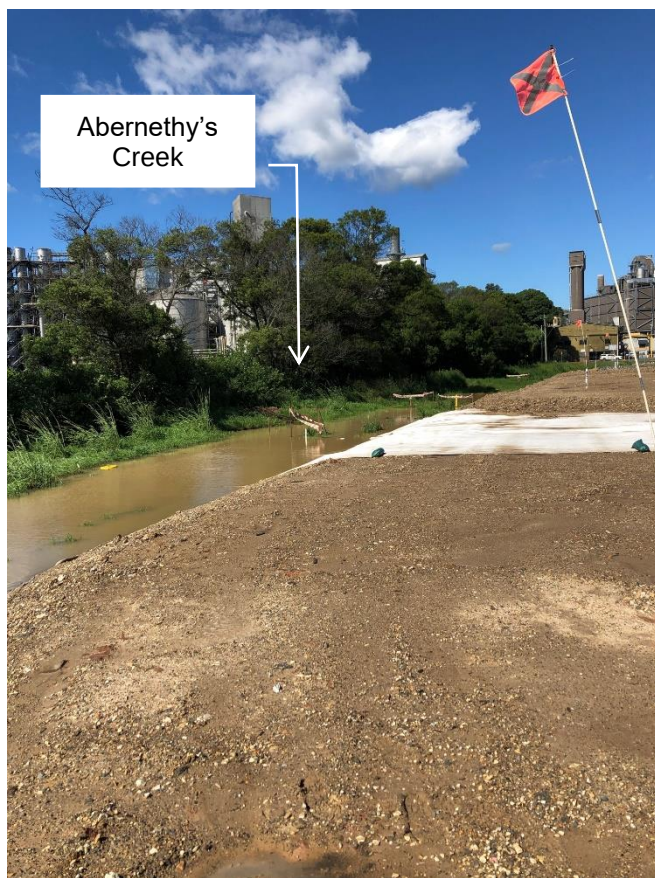


Photo 1: Looking south-east at the eastern section of the proposed gas pipeline alignment following a period of heavy rainfall (24/3/2021).



Photo 2: Looking south-east at the eastern section of the proposed gas pipeline alignment following a period of dry weather (23/4/2021).



Photo 3: Looking north-west at the northern section of the proposed gas pipeline alignment and sediment pond (23/4/2021).

3.3 Soil landscape

Reference to the 1:100,000 Kiama Soil Landscape Series Sheet (9028, First Edition) (DECCW, 2010) indicates that the site is located on Shoalhaven soil landscape. The soils are described as moderately deep Prairie Soils on levees, Red Earths and Yellow and Red Podzolic Soils on terraces and Alluvial Soils and Gleyed Podzolic soils on the floodplains. The soil landscape map also indicates that this group is subject to flood hazard, seasonal water logging, permanently high water table, hardsetting, acid sulphate potential (subsoil), strongly acidic and moderate shrink-swell potential.

3.4 Geology

3.4.1 Regional

Reference to the 1:250,000 Wollongong Geological Series Sheet (S1 56-9, Second Edition) (NSW Department of Mines, 1966) indicates the site is likely to be underlain by Quaternary Alluvium, gravel, swamp deposits and sand dunes.

3.4.2 Site specific

Thirty (30) investigation locations by Coffey were used to assess subsurface conditions for the proposed packing plant area which is situated immediately west of the proposed gas pipeline project (Coffey, 2008). The investigation locations were:

- Eight boreholes: CBH17 to CBH21, CBH24, CBH108, CBH109.
- Twenty (20) test pits: CTP1 to CTP16, CTP26 to CTP28 and CTP30
- Two piezocones: MGP3 and MGP13, terminated depths of 4.4 m and 13.1 m, respectively.

Very slow progress was encountered at depths between 1 m and 3 m below ground level (bgl) in test pits excavated using a backhoe or excavator. Very slow progress using a V bit was encountered at CBH108 and CBH109 at 4 m and 11.15 m bgl, respectively.

Fill was encountered adjacent to the railway line at locations CTP5 to CTP7 to depths between 0.8 m and 0.85 m. The fill was described as sandy material, including sand, silty sand and clayey sand and due to the soft nature of these materials does not appear to have been placed in a controlled manner during the construction of the railway line (Coffey, 2008). Remaining parts of the packing plant area had topsoil fill up to 0.4 m thick. The topsoil fill was described as silty clay/clayey silt, low to medium plasticity, brown, dark brown, pale brown/brown.

Natural alluvial and/or estuarine soils, underlying the fill and topsoil, were encountered at each location, and described generally as silty clay, mottled orange, yellow, brown, grey, medium to high plasticity, stiff to very stiff. Clayey silts and silty sands were encountered at CTP10 and CTP26. The clayey silts were dark grey, orange and black, firm to stiff, whilst the silty sands were grey, fine to medium grained. Estuarine soils were generally noted in the northern and eastern parts of the site which are typically the lower lying parts (Coffey, 2008, p. 79).

Residual and extremely weathered rock were below alluvial/estuarine soils. The soils were described as silty clay/sandy silty clay/ gravelly clay/ clayey sand, medium to high plasticity, brown-orange, pale grey, red-orange-brown mottled, orange-grey mottled, with fine to medium grained sand. The consistency of the clays was stiff to very stiff.

Highly weathered to fresh sandstone was encountered at borehole CBH24.

Similar subsurface conditions were encountered during the geotechnical investigation conducted by SMEC in 2019 (SMEC, 2020). The investigation locations relevant to this report were:

- Borehole: SBH01, SBH05, SBH07, SBH08
- CPT: SCPT01, SCPT04, SCPT06, SCPT07, SCPT08

Possible fill was noted at borehole location SBH08, which is located immediately east of the sewer main and approximately 65 m north of the proposed pressure reduction station. The possible fill may have been reworked topsoil and alluvial soils. Soft and very soft clay soils were encountered at borehole locations SBH01, SBH02 and SBH03 to depths of 4 m, 6.5 m and 9.8 m bgl, respectively. The clays were estuarine and described as dark grey high plasticity with silts, sands and shell fragments (SMEC, 2020). No anthropogenic materials were noted (SMEC, 2020).

3.5 Hydrogeology

A search of the WaterNSW groundwater bore database indicates that there are 19 groundwater bores within 500 m of the site. Three of these bores (GW110107, GW110108, GW110109) are registered within the Shoalhaven Starches property located between 95 m and 265 m south of the site. The remaining 16 bores were located between 180 m and 325 m west and north-west of the site.

Table 3.2 Summary of registered groundwater bores

Bore ID	Installation date	Registered purpose	Depth of bore (m bgl)	Standing water level (m bgl)
GW110109	2009	Monitoring	4.0	1.27 (in 2009)
GW110108	2009	Monitoring	4.5	0.644 (in 2009)
GW110107	2009	Monitoring	6.0	4.02 (in 2009)
GW113119	2008	Monitoring	5.2	Not recorded
GW113120	2008	Monitoring	6.2	Not recorded
GW113121	2008	Monitoring	5.2	Not recorded
GW113122	2008	Monitoring	5.2	Not recorded
GW113123	2008	Monitoring	4.9	Not recorded
GW113124	2008	Monitoring	4.0	Not recorded
GW113125	2008	Monitoring	4.2	Not recorded
GW113126	2008	Monitoring	4.0	Not recorded
GW114453	2011	Monitoring	6.0	2.5 (in 2011)
GW114454	2011	Monitoring	7.0	3.7 (in 2011)

Bore ID	Installation date	Registered purpose	Depth of bore (m bgl)	Standing water level (m bgl)
GW114455	2011	Monitoring	6.0	4.5 (in 2011)
GW113052	2000	Monitoring	5.1	Not recorded
GW113053	2000	Monitoring	4.5	Not recorded
GW113054	2000	Monitoring	5.0	Not recorded
GW113055	2000	Monitoring	5.1	Not recorded
GW113056	2013	Monitoring	6.0	Not recorded

Groundwater inflows were encountered at depths of 0.5 m, 2.1 m and 4 m bgl at borehole locations CBH109, CBH108 and CBH21, respectively. The groundwater inflow observed at CBH108 appeared to be associated with the sandy clay layer within alluvial soils. Groundwater inflows encountered at test pit locations CTP5 to CTP12, CTP14 were observed between 0.8 m and 1.9 m bgl. Standing water levels measured in test pits CTP5 to CTP8, CTP 11, CTP12 and CTP14 were between 0.9 m and 2 m bgl. The standing water level at groundwater monitoring well MW1/CBH108 was measured 1.290 m bgl on 10/4/2008 (Coffey, 2008).

Groundwater was encountered at borehole locations SBH01, SBH02 and SBH03 at depths of 0.6 m, 0.6 m and 0.5 m bgl, respectively (SMEC, 2020).

Based on topography, the groundwater is expected to flow in a north-easterly direction.



Figure 3-1 Groundwater bores closest to sites (source: WaterNSW)

3.6 Acid sulfate soil occurrence

ASS is naturally occurring soil and sediment containing iron sulfides which when exposed to oxygen can generate sulfuric acid.

Reference to the Burrier/Berry 1:25,000 Acid Sulfate Soil Risk Map (1997) Edition 2, prepared by the Department of Land and Water Conservation (DLWC) (DLWC, 1997), indicates that the site is mapped within an area having a low probability of ASS occurrence. The majority of site is situated within alluvial plain areas whilst the western edge of the pressure reduction station is situated within a levee landform (Figure 2-1). The depth of ASS occurrence is variable across the site:

- North-eastern portion (Ap1): depths at or near the ground surface
- North-western and southern (Ap2): depths between 1 and 3 m below the ground surface
- South-western (Al4): depths greater than 3 m below the ground surface

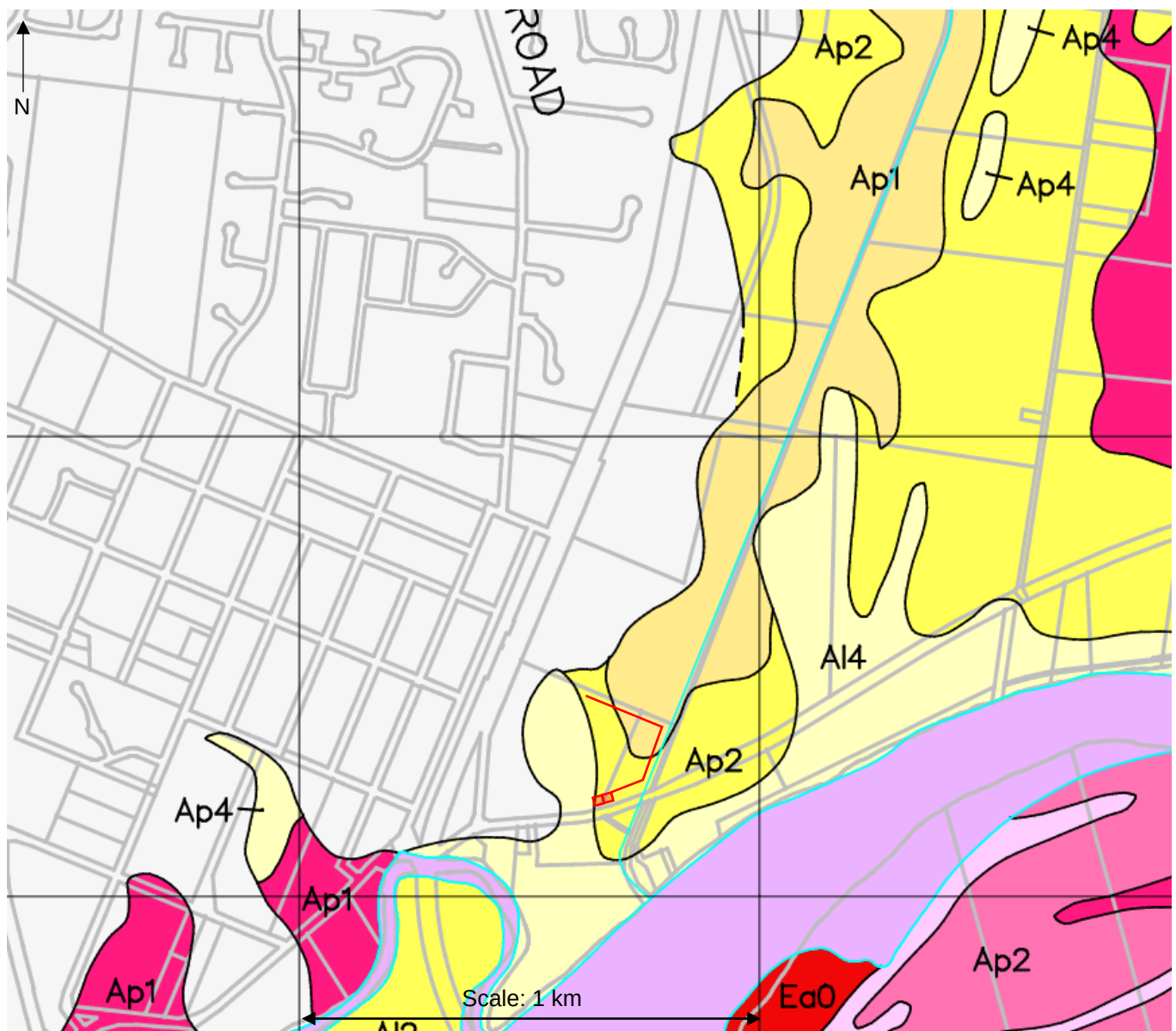


Figure 3-2 ASS Occurrence approximately shown relative to the site (red outline) (DLWC, 1997)

The previous Coffey (2008) investigation indicated that actual ASS were not encountered however screening results suggested that unoxidised sulfides may be present. Chromium reducible sulfur testing was carried out on soil samples CTP14/1.4-1.5 and CTP30/1.0-1.1, which are 8 m and 12 m from the proposed gas pipeline, respectively. Reducible inorganic sulfur (RIS) was reported in sample CTP14/1.4-1.5 however below the assessment criteria of 0.03%S. Chromium reducible sulfur concentrations for sample CTP30/1.0-1.1 were below laboratory reporting limits, indicate RIS was not present. Based on the results of the Coffey (2008) investigation, ASS are likely to be encountered within the packing plant particularly the lower lying areas, in the north and east, adjacent to Abernethy's Creek.

Soft and very soft clay soils were encountered at borehole locations SBH01, SBH02 and SBH03 to depths of 4 m, 6.5 m and 9.8 m bgl, respectively. The clays were estuarine and described as dark grey high plasticity with silts, sands and shell fragments (SMEC, 2020). No other ASS indicators were recorded by SMEC.

4. Site history

4.1 General

Information on the site history was obtained from:

- Review of selected aerial photographs (1949 to 2021).
- A search of NSW EPA register for listings of the site and nearby properties.
- A review of Section 10.7 planning certificate.
- Chemical storage inventory provided by Manildra.
- A review of previous investigation reports and summarising the relevant sections.
- Interview with a Manildra representative, John Studdert.

A summary is provided below. Relevant historical details are shown in Figure 2 (Appendix B).

4.2 Historical aerial photography

The review of aerial photography is summarised in the sections below. Aerial photographs for the site are included in the Lotsearch report (ref: LS013205EA, dated 30 June 2020 (Lotsearch, 2020)) presented in Appendix D. Aerial photographs that were on file and captured the site were also reviewed have been included in Appendix D. Additional aerial photographs were accessed via Google Earth and reviewed.

4.2.1 Proposed pressure reduction station

Between 1949 and 1984, this area of the site was occupied by a possible farmhouse and a garage/shed. The position of these structures relative to the site are shown on Figure 2 (Appendix B). The farmhouse was a medium sized rectangular structure fronting Bolong Road. A driveway from Bolong Road to the garage/shed located on the north side of the house was evident. The driveway was no longer apparent in the 1969 aerial photograph but was evident again by 1974. Small objects were noted north of the garage/shed. The area immediately west of the farmhouse appeared to have used for agricultural purposes in c1960.

In 1974, the ground surface immediately west of the farmhouse (on-site) also appears to have been disturbed forming a rectangular shaped area. The area immediately east of the farmhouse, appeared to have disturbed ground and three small objects stored within the disturbed area. By 1981, vegetation occupied the previously disturbed area east of the farmhouse. This area is where the western portion of the proposed gas pipeline, that connects to the pressure reduction station, is located (see Section 4.2.2 below).

By 1993, the farmhouse, sheds/garage and trees had been removed. The majority of this area was grass covered except for a small object that was located immediately east of former farmhouse footprint. This object is a sewer pumping station and associated with the sewer main that runs northwest of the object towards the sewerage treatment plant (refer to Figure 2, Appendix B) (Coffey, 2008, p. 28).

In 2012, the area surrounding the sewer structure, including the site, had been cleared of grass and was a grey colour. The grey colouration suggests possible handstand gravel has been imported and placed. By 2013, a gravel carpark was constructed and occupied by vehicles. A relatively large stockpile was evident between 2013 and 2016 within the south-western portion of the carpark, which is within the site. The stockpile changed configuration several times during this period. Between 2016 and 2019, the area where the stockpile was previously stored appeared grass covered.

In January 2016, several small stockpiles were stored immediately north of the site but were removed by February 2016. The stockpiles were pale brown-grey. By 2018, a relatively large pale brown fill mound was evident north of the site and likely to be associated with the proposed packing plant development.

4.2.2 Proposed gas pipeline

Bolong Road was evident since 1949, initially as an unsealed road but becoming sealed at some stage in the 1960's.

The proposed pipeline extends north-east from the proposed pressure reduction station towards Abernethy's Creek. It continues north alongside the Creek before turning west prior to the northern boundary of Lot 2. Abernethy's Creek has been evident since 1949 and its configuration has remained unchanged since that time. Vegetation progressively increased along the Creek over time.

Between 1949 and 2018, the area where the pipeline is proposed generally comprised undeveloped grass paddocks. A small white object was noted north-east of the farmhouse and immediately west of Abernethy's Creek. The c1960 oblique photograph shows a white demountable style shed at this location. Immediately south of the shed, another small structure and disturbed ground were evident. These structures were not evident in the 1961 aerial photograph. A relatively small area, immediately east of the proposed pressure reduction station, was developed circa 1974. The development comprised ground disturbance and appeared to be used to store three relatively small objects. The area was revegetated by 1981.

As discussed in Section 4.2.1, in 2012 the area was cleared of grass and grey material, possibly gravel hardstand, was placed. By 2013, a gravel carpark was constructed and occupied by vehicles. By 2018, the carpark had extended east. Ground disturbance and possible fill mounds were evident immediately east of the carpark. Between 2012 and 2018, the section proposed adjacent to the northern boundary of Lots 2 and 16, was partially occupied by trees and/or shrubs.

By April 2021, the earthworks and filling associated with the proposed packing plant was in progress. The earthworks included the placement of a large fill platform, orange-brown in colour, that occupied the majority of Lot 2 and approximately one third of Lot 16. The south-eastern and north-eastern sections of the proposed gas pipeline extend through some of these filled areas. A small pond has been constructed in the north-eastern corner of Lot 16 and is immediately south of the proposed gas pipeline route alignment. The April 2021 aerial photograph is shown on Figure 2 in Appendix B.

4.2.3 Surrounding offsite areas

Areas immediately surrounding the site were generally undeveloped grass paddocks up until 1969. In the 1969 aerial photograph, ground disturbance was evident along the sewer main easement suggesting installation occurred around this time. No further development occurred within areas surrounding the site until 2012.

As discussed in Section 4.2.2, earthworks and filling associated with the proposed packing plant development commenced circa 2018 and were still in progress as of April 2021.

4.3 NSW EPA registers

GHD carried out a search of the NSW EPA registers on 9 May 2021. The results of that search are summarised in Table 4.1. Search results are included in Appendix E.

Table 4.1 Summary of NSW EPA search results

Search	Result
Contaminated Land Record of Notices	No record for site or up to 1.9 km surrounding the site.
Notified Sites under the <i>Contaminated Land Management Act 1997</i> (CLM Act, 1997)	No record for site or up to 190 m surrounding the site. The closest record was 190 m north-west of the site. The record pertains to a Former Shell Depot located at 44 Railway Street, Bomaderry, NSW. The record states regulation under the CLM Act is not required.

Search	Result
Environmental protection licenses under the <i>Protection of the Environment Operations Act 1997</i> (POEO, 1997)	Manildra (Shoalhaven Starches) has an EPL for plant operations which includes the production of dangerous goods, general chemicals storage and general agricultural processing. A copy of the EPL is included in Appendix E. A number of licence variations also exist. A penalty notice was issued to Shoalhaven Starches in May 2018 for contravening a condition of the licence. No further details were provided on the EPA website. The penalty notice was issued to Shoalhaven Starches in May 2018 for contravening a condition of the licence was associated with a release of water containing starch into Abernethy's Creek, which is outside the sites. The release was caused by a power failure which occurred in 2017 (GHD, 2021, p. 21). The following licences were located within 500 m of the site: – Bomaderry Sewage Treatment Plant, Operated by Shoalhaven Water – immediately north of the site. – Cleary Bros – Concrete works – approximately 90 m south-west of the site at its closest point. – BOC Limited / SupaGas Pty Ltd – Dangerous goods production and storage (carbon dioxide associated with the Manildra Plant) – approximately 110 m east of site at its closest point.
EPA PFAS Investigation Program	The Shoalhaven River, which is located approximately 200 m south of the site, forms part of the PFAS investigation program. Detectable concentrations of PFOS+PFHxS were reported in water samples collected from the river on 30 May 2019, but did not exceed assessment criteria for drinking water and recreational. The NSW PFAS Taskforce <i>"advised that no new or additional precautionary dietary advice is required for the area, based on the results"</i>. Refer to https://www.epa.nsw.gov.au/your-environment/contaminated-land/pfas-investigation-program/pfas-investigation-sites/shoalhaven-river for more detail.

4.4 Section 10.7 Planning Certificate

The Section 10.7 Planning Certificates pertaining to Lot 2 DP538289 and Lot 16 DP1121337 were reviewed, and results summarised in Table 4.2 and included in Appendix F.

Table 4.2 Summary of Section 10.7 regarding contamination matters

Search	Result
Part (2) matters under section 59 (2) of the Contaminated Land Management Act 1997	Council has not been advised that the land is significantly contaminated, subject to a: management order; voluntary management proposal; ongoing maintenance order or site audit statement.
Part (5) Former land use identification	No records for current planning certificates.
Loose-filled asbestos insulation Division 1A of Part 8 of the Home Building Act 1989	The land does not include any residential premises that are listed on the register that are required to be maintained under that Division.

4.5 Chemical storage inventory

Manildra provided a copy of the chemical storage map for the plant and has been included in Appendix G. The map indicates that no chemicals are stored on or near the site. Chemical storage occurs within the main Shoalhaven Starches plant area south of the site.

4.6 Previous reports

The closest previous investigation locations to the site are listed in Section 3.4.2 and shown on Figure 2 in Appendix B. The following sections summarise relevant information pertaining to contamination aspects for the site.

4.6.1 Preliminary environmental site assessment and geotechnical investigation (Coffey, 2008)

The Coffey (2008) investigation assessed contamination aspects within the proposed packing plant which includes the majority of the current investigation area.

The 2008 investigation assessed the likelihood for contamination to exist in areas where upgrade works are proposed from past or present activities and to make recommendations on the need for further investigation and/or remediation should contamination be present. The scope of work carried out to achieve this objective included a desktop and site history study, site walkover, intrusive investigations, from which soil and groundwater samples were collected and analysed for identified contaminants of potential concern (COPC).

Site history information indicated that prior to 1950, the sites and surrounding areas were possibly used for rural land use. Between 1974 and 1979, the sewage treatment works was constructed north of the site.

At the time of the 2008 investigation, the site formed part of a vacant grass covered area used to keep horses. Some ponding of water was noted following a proceeding rainfall event. The ground surface was noted to be spongy and soft under foot. Vegetation that had previously been growing along the top of the Abernethy's Creek was also noted to have been recently cleared with the vegetation cuttings piled up in the north-eastern corner of the study area.

A filled ramp area was noted in the central western part of this proposed packing plant. Some fragments of potential asbestos containing material (ACM) were noted in this filled area at test pit location CTP28. Both the fill and potential ACM were outside of the current investigation area. The asbestos impacted material was removed in 2016 (ES, 2016). No other evidence of contamination, waste material or stressed vegetation was noted in 2008.

Based on site history and site observations, seven areas of environmental concern (AEC) were identified, three of which had relevance to the current investigation area. These AECs included:

- AEC 2: Potential weathering of hazardous building materials and demolition of site structures. This AEC was pertaining to the former farmhouse that was located in the southern part of the site, where the pressure reduction station is proposed. The likelihood of contamination was assessed as moderate, as previous demolition practices were not well documented.
- AEC 4: Fill of unknown quality and origin. Based on site history, extensive filling was not expected. Some filling had occurred in the western part of the proposed packing plant and in the vicinity of the railway line. Both areas are outside of the current investigation area. The potential for contamination in the western part of the packing plant was assessed as high due to the presence of fill and ACM fragments at CTP28, however the remaining areas were assessed as having a low likelihood of contamination.
- AEC 6: Leaks from sewer line and nearby sewage treatment plant. Anecdotal information indicated that the sewer line that runs through the proposed packing plant site may have leaked and therefore assessed as having a moderate likelihood of contamination. The 2008 report inferred that the sewer pipeline was an asbestos pipe and if the sewer pipeline were to have ruptured then localised asbestos impacts may occur in soils adjoining the damaged portion of the pipe. There was no record that the sewer pipe had ruptured or had been damaged.

Twenty-four (24) samples, collected from test pits and boreholes used to assess the packing plant area were analysed for total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, xylenes (BTEX), polycyclic aromatic hydrocarbons (PAH), organochlorine pesticides (OCP), organophosphorus pesticides (OPP), polychlorinated biphenyls (PCB), heavy metals and/or asbestos. Seven of these samples were collected from CTP8, CTP10, CTP13, CTP14 and CTP30, which are located between 7 m and 12 m of the site (refer to Figure 2 in Appendix B). These soil samples represented topsoil and alluvial soil; no fill was encountered at these locations.

For the seven samples collected from CTP8, CTP10, CTP13, CTP14 and CTP30, heavy metal concentrations were relatively low and well below the adopted assessment criteria for commercial / industrial land use. Concentrations of TPH, BTEX, PAH, OCP, OPP and PCB were below the laboratory reporting limit and below the adopted assessment criteria. Concentrations were compared to the current assessment criteria for industrial / commercial land use, ASC NEPM (NEPC, 2013); no exceedances were reported. It is noted that direct comparison of TPH concentrations could not be made however concentrations were below the laboratory reporting limit and therefore unlikely to exceed ASC NEPM (NEPC, 2013) assessment criteria. Laboratory results were consistent with field observations where no evidence of contamination was noted during sampling. No evidence of fill was observed at test pit locations CTP8, CTP10, CTP13, CTP14 and CTP30.

It is noted that localised TPH and asbestos impacts within the upper 0.1 m of the soil profile were reported at CTP28. CTP28 is approximately 120 m south-west of the site at its closest point and therefore not considered relevant to the contamination status of the current investigation area. The source was not identified but potentially associated with the fill and/or discharges from the neighbouring properties. Coffey recommended further investigation to assess the extent and significance of the contamination.

Elevated concentrations of zinc and lead were noted in groundwater sampled from one well (CBH108/MW1) within the proposed packing plant, approximately 94 m from the site at its closest point and downgradient of the sewer main. Concentrations exceeded drinking water (NHMRC/ARMCANZ, 2004) and/or protection of freshwater aquatic ecosystem trigger values (ANZECC/ARMCANZ, 2000). The source of zinc and lead was not identified but could have been associated with background concentrations. Faecal coliform concentrations were below the reporting limit suggesting leaks from the sewer main were not occurring in the vicinity of the groundwater monitoring well.

The report concluded that *“based on the results of this assessment, the potential for widespread soil contamination that would preclude these areas from being redeveloped for industrial land use is considered to be low. Some relatively localised contamination could exist from previous activities (particularly within the Shoalhaven Starches Plant)”*.

4.6.2 Site audit statement, proposed packing plant (ES, 2016)

NSW EPA accredited Site Auditor, Tim Chambers, was appointed in March 2016 to prepare a Site Audit Report (SAR) and Site Audit Statement (SAS) in relation to the proposed packing plant development on Lot 16 DP 1121337 and Lot 2 DP 538289. The site audit was required to satisfy condition 20 of the consent issued by the NSW Minister for Planning and was therefore a statutory audit under the CLM Act 1997.

The audit included review of the Coffey (2008) report and subsequent reports prepared by ENRS in 2016 required to address asbestos and TPH contamination identified at CTP28. These subsequent reports included a remediation action plan (RAP), waste classification and validation report.

The auditor noted, in relation to exceeding zinc and lead concentration in groundwater, that these heavy metals were widespread urban pollutants and can also be naturally occurring. There was no apparent source identified on-site in the past or present to explain these impacts. Therefore, the auditor was satisfied that the minor heavy metal impacts were not significant and did not warrant further investigation (ES, 2016, p. 15).

Sections 8.2.2 to 8.2.4 of the SAR summarise the ENSR reports. The summary of the validation report indicated that the TRH and asbestos impacts were successfully removed, and that no further remediation or site management was required.

The SAR concluded that the proposed packing plant site (Lot 16 DP 1121337 and Lot 2 DP 538289) had been adequately assessed and areas of TRH and asbestos impact successfully remediated and was therefore suitable for the proposed industrial development without further assessment or remediation.

4.6.3 Packing Plant soft soil improvement design (SMEC, 2020)

Manildra engaged SMEC to provide detailed design and issued for construction (IFC) drawings for the soft soil improvement within the Packing Plant development (SMEC, 2020). To inform the design, SMEC conducted geotechnical investigation which included boreholes and Cone Penetrometer Test (CPT) within the vicinity of Abernethy's Creek within the Packing Plant development.

The subsurface condition encountered were similar to the findings detailed in Coffey report (2008). However, this report considerably focused in determining the extent and degree of variance of the soft soil areas within the vicinity of Abernethy's Creek. This included laboratory testing to determine appropriate in-situ shear strength and consolidation parameters.

Possible fill was noted at borehole location SBH08, which is located immediately east of the sewer main and approximately 65 m north of the proposed pressure reduction station. The possible fill may have been reworked topsoil and alluvial soils. No anthropogenic materials were noted. No other observations relating to potential contamination indicators were recorded in this report.

4.6.4 VENM certificate – Nowra Gaol (ENRS, 2018)

Three stockpiles comprising clay with shale and gravel were generated as part of the South Coast Correction Centre (Nowra Gaol) at No. 55 The Links Road, Nowra Hill, NSW. The stockpiles had a combined volume of 22,797 m³. This material was imported to Lot 2 and Lot 16 for the proposed packing plant development. A portion of this material extends onto the current investigation area.

Thirteen (13) soil samples were collected from the material and analysed for TRH, BTEX, PAH, OCP, OPP, PCB, heavy metals, asbestos, pH and electrical conductivity. The report compared contaminant concentrations to ASC NEPC (NEPC, 2013) and ENM (NSW EPA, 2014) assessment criteria. No reported concentrations exceeded the assessment criteria. Concentrations of TRH, BTEX, PAH, OCP, OPP, PCB were below the laboratory reporting limit, and no asbestos was detected. Detectable concentrations of some heavy metals were reported; however, these concentrations were relatively low but did exceed ambient background concentrations (Olszowy, Torr, & Imray, 1995) recommended in Section 3.6.1.2 Schedule B5C (NEPC, 2013). pH indicated slightly acidic soils. Electrical conductivity results indicate soils are non-saline to slightly saline (DLWC, 2002). No evidence of contamination such as ACM, odours or staining were reported during sampling.

The material was assessed as Virgin Excavated Natural Material (VENM).

4.7 Interviews

An interview was undertaken with Mr John Studdert on 23 April and 17 June 2021. Mr Studdert has worked at the Manildra Plant since 2000 and has been involved with plant operations over this time. Mr Studdert provided the following information for the site:

- A farmhouse previously occupied the portion of the site where the pressure reduction station is proposed. Activities associated with the farmhouse, such as chemical storage, were unknown. No information was available for the two structures, identified in the 1960s oblique photo (Appendix D), located immediately west of Abernethy's Creek. No information was available on building materials used in the construction of these structures or demolition practices employed for their removal.
- No pesticide application or chemical storage has occurred at or adjacent to the site. During the site walkover, an IBC half full of brown liquid was observed approximately 40 m north of the site, and immediately north of the carpark fence (refer to Section 4.7). The liquid may have been oil however the source was unknown. Manildra has arranged for the IBC to be removed and be placed in an appropriately bunded area.
- No accidental releases of fuels or oils from plant and equipment working on the packing plant development have occurred.
- Prior to the sewerage treatment works upgrade, effluent would enter Abernethy's Creek during heavy rainfall and flood events, temporarily impacting water quality of the Creek. No reported leaks associated with the pump station or sewer main have occurred.
- The fill placed, as part of the packing plant development, was sourced from the Nowra Gaol development site. The material comprised natural soil and rock and classified as VENM (refer to Section 4.6.4). Apart from quarry product (see below), fill has not been sourced from any other location.

- Road base quarry material was imported to the site from late 2015 to January 2016 for the gravel hardstand carpark expansion. The road base was sourced from Boral Quarry at Bombo, NSW, and was classified as VENM¹. The carpark has only been used for the parking of vehicles.
- The gravel ramp located immediately west of Abernethy's Creek was formed with basalt 40-70 mm drainage material sourced from Boral Quarry at Dunmore, NSW, and was classified as VENM¹. Manildra provided a letter from Boral Limited (Boral) that the drainage project was sourced from its Dunmore quarry (Boral, 2021).
- The source of fill mounds stored immediately north of the site in January 2016 was excavated soil from Starch Dryer 5 construction in the main Shoalhaven Starches plant. The material was transported to Shoalhaven Starches Environmental Farm located east of the site.
- The stockpile that occupied the south-western portion of the carpark between 2013 and 2016 was not a stockpile. The area was darkened and occupied by grass/weeds. [Google Street View image dated May 2015, shows a small stockpile, possibly grass and topsoil from this darkened area]
- The pond located in the north-eastern corner of Lot 16 and immediately south of the proposed gas pipeline route was excavated in circa November 2020. Earthen drains, parallel to the northern boundary of Lot 16, were excavated at a similar time. The excavated material was used to form adjoining soil mounds, embankments, and bunds. No evidence of contamination or ASS indicators were observed during the excavation of the pond. The pond is used to collect runoff from the packing plant area currently being filled.
- The source of asphalt fragments observed in embankments / bunds, constructed in the northern part of Lot 16, immediately south of the proposed gas pipeline route, was unknown.

4.8 Gaps in the site history

Limited information is available for land use activities prior to 1949.

Limited information is available on the farmhouse that previously occupied the area designated for the proposed pressure reduction station, and small structures immediately west of Abernethy's Creek. Given the age of these structures, hazardous building materials cannot be precluded. The farmhouse was removed some stage between 1981 and 1993, and structures west of Abernethy's Creek prior to 1961. Historically demolition practices during this period were relatively poor and may have caused localised asbestos and/or heavy metal impacts to near surface soils within the footprint and immediate surrounds of these former structures.

4.9 Site history summary

Site history information indicated that prior to 1950, the site and surrounding areas were possibly used for rural land use. In 2008, horses were agisted within the grass paddocks. Apart from a possible farmhouse, structures immediately west of Abernethy's Creek, installation of the sewer main in the 1960's and sewer pump station, the site and surrounding areas remained generally undeveloped until 2012. Circa 2012, a carpark comprising grey gravel hardstand was constructed in the area where the pressure reduction station and western portion of the gas pipeline are proposed. Anecdotal information indicates that the gravel was sourced from a local quarry. Development of the site and surrounding areas continued with the expansion of the gravel carpark between 2013 and 2016 and importation of some fill north of the site in January 2016 but was removed one month later.

The source of fill mounds stored immediately north of the site in January 2016 was excavated soil from Starch Dryer 5 construction in the main Shoalhaven Starches plant. The material was transported to Shoalhaven Starches Environmental Farm located east of the site. The south-western corner of the carpark was occupied by a stockpile between 2013 and 2016. Anecdotal information indicated that the area was darkened and occupied by grass/weeds, rather than a stockpile. Google Street View image dated May 2015, shows a small stockpile, possibly grass and topsoil from this darkened area.

¹ The NSW EPA has provided advice that "commercially quarried material is not considered a waste material and therefore would not be required to be classified under the waste classification process or require a VENM certificate" (NSW EPA, 2020)

Earthworks associated with the proposed packing plant commenced in 2018 where the importation of pale brown and orange-brown material occurring between 2018 and 2021. Anecdotal information indicates that the imported material was sourced from the Nowra Gaol development site and classified as VENM. Grey gravel, basalt 40-70 mm drainage gravel, used to form a ramp parallel to Abernethy's Creek was also imported and sourced from a local quarry. The gravel classified as VENM. Fill has not been sourced from any other location.

Fill mounds, embankments and bunds located on in the northern part Lot 16 and immediately south of the proposed gas pipeline route, were generated from the excavation of an earthen and pond. The material was natural soils have asphalt was noted on the surface of one of the embankments (refer to Section 5.3.1). The source of the asphalt fragments was unknown.

Previous investigations did not identify soil contamination at the site that exceeded commercial / industrial assessment criteria. However, localised TPH and asbestos impacts were identified in near surface soils at CTP28, west of the site (i.e., off-site) and later remediated in 2016.

For groundwater, lead and zinc concentrations exceeded the adopted assessment criteria (ANZECC/ARMCANZ, 2000). The source of zinc and lead was not identified but could have been associated with background concentrations. Faecal coliform concentrations were below the reporting limit suggesting leaks from the sewer main were not occurring in the vicinity of the groundwater monitoring well. It was concluded that the heavy metal impacts were not significant and did not warrant further investigation (ES, 2016).

In 2016, a site audit for the proposed packing plant development site was required to satisfy condition 20 of the consent issued by the NSW Minister for Planning and was therefore a statutory audit under the CLM Act 1997. The SAR concluded that based on the results of previous investigation and subsequent remediation and validation of TRH and asbestos impacts that were identified west of the current investigation area (i.e., CTP28 – off-site), that the packing plant development site, which includes the current investigation site, was suitable for commercial / industrial land use.

No pesticide application or chemicals have been stored at the site. No accidental releases of fuels or oils from plant and equipment working on the packing plant development has occurred. No reported leaks associated with the pump station or sewer main have occurred.

Manildra (Shoalhaven Starches) has an Environmental Protection Licence (EPL) for plant operations which includes the production of dangerous goods, general chemicals storage and general agricultural processing. A penalty notice was issued to Shoalhaven Starches in May 2018 for contravening a condition of the licence was associated with a release of water containing starch into Abernethy's Creek, which is outside the sites. The release was caused by a power failure which occurred in 2017. This release occurred off-site and not considered to impact the site.

There are no Contaminated Land Record of Notices, Notified Sites under the Contaminated Land Management Act 1997 associated with the site.

5. Site observations

5.1 General

The site walkover was carried out by technical directors for geotechnical engineering and contaminated land on 23 April 2021. Additional observations were made on 17 June 2021. Photographs have been selected for each area to show the general site conditions observed as presented in the sections below. Relevant observations are shown on Figure 2 in Appendix B.

Observations made for area are discussed in the following sections.

5.2 Proposed pressure reduction station

The area where the pressure reduction station is proposed is currently a gravel hardstand carpark and amenities area for workers associated with the packing plant development occurring north of the site. The amenities portion generally occupied the southern two-thirds of the site, whilst the remaining northern third was used for carparking. The south-western corner of the site was a disused area comprising gravel fill, which had extended west from the amenities area, grass/weeds, fill material, service conduits, litter and dilapidated wooden post and wire fence. Refer to Photo 4 to Photo 9.

The carpark occupying the northern third of the site was as a relatively flat area and appeared to be constructed using road base material. The gravel appeared uniform, suggesting a single source and of latite origin. The carpark was bounded by temporary fencing. Some surface water ponding was present in the carpark from recent rain, no areas were noted to be soft underfoot. The carpark area also extended beyond the site boundary towards north and north-east. The amenities area comprised a demountable toilet block and two small, covered seating areas. The ground surface was similar to the carparking area, gravel hardstand and near level. No anthropogenic materials were observed within the gravel fill used within the carpark or amenities area. Refer to Photo 4 to Photo 7, and Photo 9.

The fill that was observed in the south-western corner of the site, also extended to areas within the rail corridor and slightly north towards a vegetated area adjoining the north-western corner of the site. The fill consisted predominately of a sandy gravel material, trace amounts of ballast, ceramics, metal fragments, concrete and solidified asphalt were observed on the surface, no asbestos was observed on the surface. Refer to Photo 8.

A 250 mm culvert outlet was observed on the western side of the site, in good condition and with no blockage. The concrete culvert headwall appeared damaged with cracking and chips noted. The pipe was PVC and appeared to continue in an easterly direction, passing below the site. Refer to Photo 8 and Photo 10.

The following observations were noted in areas immediately surrounding the site:

- To the north of the site was more unpaved carpark, further north there was some ongoing earthworks and grassed areas acting as storage/laydown area for machinery and plant. An IBC half full of brown liquid was observed approximately 40 m north of the site, immediately north of the carpark fence. Contents of the IBC may have been oil and was scheduled for removal to an appropriately bunded area (refer to Section 4.7).
- To the north-west of the site was train stabling and what looked like other train related equipment/attachments were observed stored on the ground. A shipping container and demountable unit with unknown contents was observed in this area.
- To the east of the site bulk earthworks was ongoing, with large fill placements.
- To the west of the site was the rail corridor and railway track, further west there were other industrial/commercial buildings.
- To the south was Bolong Road, further south is the Shoalhaven Starches plant.

No evidence of contamination such as ACM, odours or staining was observed.

Obvious visual evidence of ASS such as scald areas, iron leaching or jarosite staining were not noted on the surface.



Photo 4: North-east at the southern two-thirds of the site at the amenities area (17/6/2021).



Photo 5: Looking north along the access driveway to the carparking area the occupies the northern one third of the site. Note sewer pumping station in the right-hand side of photo (17/6/2021).



Photo 6: Looking south-east at the gravel hardstand carpark that falls within the site boundary and extends north of the site. Note ponded water in the background of the photo, refer to Photo 7 below (17/6/2021).



Photo 7: Ponded water (17/6/2021).



Photo 8: Looking north at the south-western corner of the site where fill material was observed. Note concrete culvert in background, refer to Photo 10 (17/6/2021).



Photo 9: Looking north at areas adjacent to the western site boundary (17/6/2021).



Photo 10: Looking at the concrete culvert within the south-western portion of the site (17/6/2021).

5.3 Proposed gas pipeline

5.3.1 Contamination

The western portion of the proposed gas pipeline, immediately east of the pressure reduction station, is situated below an area used as a gravel carpark (refer to Section 5.2). The pipeline route continues north-east passing through areas recently filled as part of the packing plant development. The fill in this area of the site comprised sandy clayey gravel, brown-orange and appeared to be of weathered siltstone origin; and coarse grained grey gravel, which appeared to be latite. The latite gravel formed a ramp, which was orientated in a north-east / south-west direction, parallel to Abernethy's Creek and contained numerous wick drains protruding from the surface. Several piezometers used for monitoring soft soil treatment were also installed throughout the filled areas. The fill platform was associated with ground treatment activities for soft soils in preparation for the packing plant development and appeared to be between 0.5 m and 2 m thick. The thickest area of fill was within the north-eastern corner of Lot 2. Refer to Photo 11 to Photo 16, and Photo 19 to Photo 21.

The remaining section of the pipeline route continues north-east, parallel to Abernethy's Creek before turning west prior to reaching the northern boundary of Lot 2. This section of the pipeline route is situated at the toe of a recently constructed fill platform and was occupied by long grass. The pipeline route passes immediately north of a sediment pond and earthen drain. The long grass obscured observations of the ground surface. Refer to Photo 13 to Photo 16, Photo 19 and Photo 20.

Three stockpiles comprising topsoil and decaying grasses were stored immediately south of the proposed gas pipeline route. The material was generated from the construction of the adjoining earthen drain and embankments/bunds that run parallel to the northern boundary of Lot 16. The stockpiles were generally covered with vegetation which limited observations of the stored materials. Where observations were possible, the stockpile material appeared to be topsoil with some concrete fragments and clay clumps. Observations of soils within the drain, bund and embankments were limited to small, exposed batches of soils amongst thick vegetation. The bund/embankment material was a sandy clay, fine to coarse grained, brown-orange with trace amounts of asphalt fragments.

No evidence of contamination such as ACM, odours or staining was observed.

Obvious visual evidence of ASS such as scald areas, iron leaching or jarosite staining were not noted on the surface.

5.3.2 Geotechnical

Site surface conditions along the section of the proposed gas pipeline within the riparian corridor adjacent to Abernethy's Creek are shown in Photo 11 to Photo 21 below, with relevant descriptive captions.



Photo 11: North-west at the latite gravel ramp in the foreground and weathered siltstone fill platform in the background. Note wick drains and piezocones installed within the latite gravel ramp (23/4/2021).



Photo 12: Looking south along the proposed gas pipeline route (23/4/2021).



Photo 13: Looking west at proposed gas pipeline route (23/4/2021).



Photo 14: Looking east at the proposed gas pipeline route at the toe of the fill platform and adjacent thickly grassed area (23/4/2021).



Photo 15: Looking at the western portion of the proposed gas pipeline route positioned adjacent to the northern boundary of Lot 16 (23/4/2021).



Photo 16: Looking north-west within the north-eastern portion of Lot 16. Note sediment pond on the right, and embankments and bunds in the background. The proposed gas pipeline will be located between the pond at the northern boundary of Lot 16 within grass area (23/4/2021).



Photo 17: Looking south-east at Abernethy's Creek (23/4/2021).



Photo 18: Looking north-west at Abernethy's Creek (23/4/2021).



Photo 19: Looking north along the proposed gas pipeline route, located between the toe of the fill platform and Abernethy's Creek (23/4/2021).



Photo 20: Looking south along the proposed gas pipeline route, located between the toe of the fill platform and Abernethy's Creek (23/4/2021).



Photo 21: Looking south towards the section of proposed gas pipeline route that connects to the pressure reduction station (24/3/2021).

6. Preliminary conceptual site model

A conceptual site model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM is developed using information obtained from site history, site observations, land use and expected ground conditions. Once the contamination status is understood through the sampling and analysis process, the CSM then allows the assessor to evaluate the risk posed by the contamination to the identified receptor, and whether actions are required to manage that risk.

6.1 Potential sources

Site history information and site observations indicate a number of potentially contaminating activities that have occurred at the site. These activities have been identified as areas of environmental concern (AEC), which are shown on Figure 3 in Appendix B and discussed below.

6.1.1 On-site sources

- AEC 1: Potential weathering of hazardous building materials and demolition of site structures, and possible storage and use of chemicals (e.g., fuels, oils, pesticides).
 - This AEC pertains to the former farmhouse that was located in the southern part of the site, and structures immediately west of Abernethy's Creek. The farmhouse was constructed prior to 1949, and the structures immediately west of Abernethy's Creek were constructed c1960.
 - Given the age of these structures, the use of hazardous building materials such as ACM in their construction cannot be precluded. The structures west of the Creek were removed by 1961, and the farmhouse was demolished some stage between 1984 and 1993. Demolition practices were not documented.
 - Weathering and poor demolition practices can cause asbestos and heavy metal impacts to near surface soils within the footprint and/or areas immediately surrounding the structure(s). The potential impacts to surface soils are unknown. Coffey (2008) did not observe evidence of these former structures or potential ACM at these locations. Test pit location CTP30 was excavated within the footprint of one of the structures located immediately west of Abernethy's Creek. A sample representing topsoil reported OCP, OPP and heavy metals concentrations below the commercial / industrial assessment criteria (NEPC, 2013).
 - It is not uncommon for small quantities of chemicals, such as fuels, oils and pesticides, to be stored and used at farmhouses. Contamination, if present, is expected to be localised and near surface. Coffey (2008) did not report evidence of oil staining within this area of the proposed packing plant.
 - Based on previous and current investigation results, the likelihood of contamination was assessed as low².
- AEC 2: Fill of unknown quality and origin.
 - Based on site history, extensive filling has not occurred at the site, prior to 2012. Prior to the packing plant development, some filling had occurred in the western part of the proposed packing plant site and in the vicinity of the railway line. Both areas are outside of the current investigation area.
 - Since 2012, progressive filling has occurred at the site and surrounding areas. Initially to form the gravel carpark then more extensive filling between 2018 and 2021 as part of the packing plant development. Anecdotal information indicates that the gravel used in the carpark and gravel ramp immediately west of Abernethy's Creek were sourced from a local quarry and therefore likely to be VENM. The remaining fill used for the packing plant development was sourced from the Nowra Gaol development and was assessed as VENM (refer to Section 4.6.4). No evidence of anthropogenic materials was observed at the surface of fill areas during the 2021 site walkover. Anecdotal information indicated that fill has not been sourced from any other location.

² Likelihood is the probability of contamination being present and subject to exposure during the proposed installation, categorised on a scale from high (near 100% probability of being present) to very low (near 0% probability of being present).

- A relatively large stockpile was evident between 2013 and 2016 within the south-western portion of the carpark, which is within the site. The stockpile changed configuration several times during this period. Between 2016 and 2019, the area where the stockpile was previously stored appeared grass covered. Anecdotal information indicated that area was darkened and occupied by grass/weeds, rather than a stockpile. However, Google Street View image dated May 2015, showed a small stockpile, possibly grass and topsoil from this darkened area.
-
- The depth of impact and extent associated with the fill will be governed by the thickness and distribution of fill used in a particular area of a site. Fill below the gravel carpark is expected to be less than 0.5 m thick. Thicker fill may occur in the vicinity of the railway corridor. Previous investigations recorded fill up to 0.85 m thick in test pits adjacent to the railway corridor. Extensive filling, associated with the packing plant development, has occurred in areas generally adjacent to the site, however some sections of the proposed gas pipeline route will pass through this imported fill. The imported fill appeared to be between 0.5 m and 2 m thick, and thickest in the north-eastern part of Lot 2.
- Based on previous investigation results and the source of fill imported to the site, the likelihood for contamination is assessed as low².
- AEC 3: Leaks from sewer line and nearby sewage treatment plant. Potential asbestos used in sewer main pipe and historical damage.
 - The Coffey (2008) investigation identified the central and northern parts of the proposed packing plant areas to be potentially impacted by sewage. The source of the impacts was considered to be from the sewer line that runs through the proposed packing plant site which could have leaked, and from on-site migration from the sewerage treatment works located north of the site. Results of the previous investigation did not identify contamination relating to potential sewer leaks (Coffey, 2008). The configuration of the sewerage treatment works changed circa 2020 as part of a recent upgrade to the facility. The treatment ponds located immediately north of the site were decommissioned, which is likely to reduce the potential for on-site migration of sewage, in particular during heavy rainfall and flooding events. Recent site observations and review of site history information since 2008, has not identified potential impacts from the sewer main, sewer pumping station and adjoining treatment works.
 - The Coffey (2008) report inferred that the sewer pipeline was an asbestos pipe and if the sewer pipeline were to have ruptured then localised asbestos impacts may occur in soils adjoining the damaged portion of the pipe. There was no record that the sewer pipe had ruptured or had been damaged.
 - Based on previous and current investigation results, the likelihood of contamination was assessed as low².

6.1.2 Off-site sources

The off-site sources are considered to be the same as those listed in Section 6.1.1, as each site forms part of a larger parcel of land where the surrounding activities are the same as those on-site. Historically on-site migration of sewage may have occurred from the sewerage treatment works potentially impacting the northern portion of the site near the boundaries of Lot 2 and Lot 16. However, since the sewerage treatment works has been upgraded, the likelihood of on-site migration from the adjoining treatment ponds has reduced.

6.1.3 Contaminants of potential concern

A broad suite of contaminants of potential concern (COPC) is potentially associated with the identified sources, including:

- AEC 1: Asbestos and heavy metals (in particular lead and zinc) for hazardous building materials. TRH, BTEX, PAH, OCP, OPP and heavy metals associated with the storage and use of chemicals.
- AEC 2: TRH, BTEX, PAH, OCP, OPP, PCB, heavy metal and asbestos.
- AEC 3: TRH, faecal coliforms, pathogens, nutrients, heavy metals. The Coffey (2008) report inferred that the sewer main may have been constructed using an asbestos pipe. If this pipe had been damaged, asbestos fragments and/or fibres may cause localised impact to surrounding soil.

6.2 Pathways

The primary pathways by which potential receptors could be exposed to the COPC outlined above, if present, are considered to be:

- Dermal contact with contaminated soils.
- Incidental ingestion of contaminated soil or dust.
- Inhalation of dust from contaminated soils.
- Inhalation of vapours/gases generated by soil contaminated by volatiles and/or semi-volatiles.
- Leaching of contaminants from impacted soil and migration into groundwater and/or surface water.

6.3 Receptors

This assessment focuses on the proposed land use associated the installation of the Gas Pressure Reduction Facility (GPRF) and ongoing maintenance. Accordingly, the key receptors of interest include:

- Future workers/visitors: the primary receptor is considered to be workers involved with the associated earthworks, such as those working directly working with soil. Individuals may also be involved in potential future construction and maintenance of site infrastructure. Other site activities are above ground for example workers walking throughout the site.
- Groundwater users: groundwater bores within 500 m were registered for monitoring purposes. The Bomaderry area uses reticulated water.
- Ecological receptor: transitory wildlife, such as frog, snakes and birds may exist within trees, shrubs grassed areas and near water bodies at or adjacent to the site. Aquatic species are likely to exist in Abernethy's Creek and may also exist in the sediment pond. The earthen drain is considered to be ephemeral and may support aquatic species periodically.

6.4 Source-pathway-receptor (SPR) linkages

For the proposed GPRF installation, the primary receptor is considered to be workers involved with the associated earthworks, such as those working directly working with soil. Earthworks are likely to involve shallow excavations associated with pavements and installation of underground services whilst deeper excavations will be required for foundations. Future maintenance activities may require earthworks. This exposure scenario provides an increased likelihood that workers will be in direct contact with soil and exposed to dust and vapours via inhalation generated during excavation. Therefore, the SPR linkages could be complete if contamination exists.

Remaining activities carried out by site workers/visitors do not involve direct contact with below ground structures, soil or groundwater and the pavements across the sites and surrounding areas reduce the opportunity for potential exposure to contamination. Therefore, SPR linkages are considered incomplete for this scenario.

The proposed gas pipeline trench will be 0.6 m deep and the foundations for the proposed pressure reduction station will likely comprise piles founded at depths of greater than 5 m; therefore, groundwater is likely to be intercepted and brought to the surface with excavation spoil. This exposure scenario provides an increased likelihood that workers will be in direct contact with groundwater. Therefore, the SPR linkages could be complete if contamination exists in groundwater.

Nineteen (19) groundwater bores, registered for monitoring purposes, exist within 500 m of the site. Given that groundwater does not appear to be beneficially used within 500 m of the sites and the surrounding areas use reticulated water, groundwater users have not been identified as a receptor, therefore the SPR linkages are incomplete.

Transitory wildlife, such as frogs, snakes and birds may have direct contact with soil and surface water bodies at or adjacent to the site. Aquatic species are likely to exist in Abernethy's Creek and may also exist in the sediment pond, and periodically in earthen drains. If contamination were present in soil or entered the waterbodies, then the SPR linkages could be complete.

6.5 CSM conclusions

Based on review of the potential source-pathway-receptor (SPR) linkages, the proposed development and future site works may provide direct contact / inhalation (i.e., vapours, dust) exposure opportunities for human and ecological receptors to contamination, if present within these AECs. Based previous and current investigation results, the likelihood for contamination to exist at the site is assessed as low. Therefore, due to the likely absence of contamination at the site, the SPR linkages are considered incomplete.

7. Slope stability analysis

7.1 Objective

A slope stability analysis was carried out to assess the potential influence of the proposed gas pipeline construction on the stability of the nearest bank of Abernethy's Creek.

The proposed gas pipeline is located 15 m from the western bank of Abernethy's Creek. According to an email received from Manildra on 28 May 2021, the gas pipeline will be installed at a depth of 600 mm.

In conjunction to this modification, we note that a third rail siding is proposed located at a minimum distance of approximately 30 m from the western bank of Abernethy's Creek. The third rail siding will be founded on a structural fill embankment which will be subjected to preloading and will extend closer to the western bank of Abernethy's Creek. This third rail siding terminates approximately 75 m from the northern boundary of the site.

A perimeter road will be constructed between the rail embankment and Abernethy's Creek.

These stability analyses considered a 1 m deep trench to be excavated along the alignment of the gas pipeline during construction, in addition to train loads, heavy vehicle loads, preloading surcharge loads, construction loads, and shipping container storage loads.

Further details relating to the third rail siding embankment and previous slope stability analyses conducted by GHD in relation to other modifications within the Packing Plant are provided in GHD report (2021).

7.2 Methodology

This slope stability analysis has been conducted using Slope/W (GeoStudio 2019 R2, version 10.1.1.18) and adopting the Morgenstern – Price method of stability analysis. The analysis was carried out based on the following methodology:

- Develop the analysis geometry based on the following:
 - Natural site contours (including Abernethy's Creek bank and invert elevation) based on the preliminary site contour layout provided to Manildra by Allen Price and Scarratts Pty Ltd.
 - Structural fill and surcharge levels from the SMEC (2020) report.
- Develop the geological model and geotechnical parameters based on the slope stability models in the SMEC (2020) and GHD (2021) reports. Two sections were used as reference for this report:
 - Section A at the northern portion of the site, based on SMEC (2020) report. This section represents portion of the site where the thickest layer of soft soil is anticipated. The proposed rail embankment considered in this section services the first and second rail siding only.
 - Section D at the southern portion of the site, GHD (2021) report. This section represents portion of the site where relatively thinner layer of soil is anticipated. The proposed rail embankment services the first to third rail siding only.
 - A copy of the reference section A and section D slope stability models is provided in section Appendix H.
 - Both Coffey and SMEC geotechnical investigations encountered similar subsurface geologic layers. However, as pointed out in Section 12.1.4.2 of the Coffey (2008) report, the subsurface conditions in the Packing Plant vary considerably, particularly at the deep soft soil zones at the northern portion of the site. Coffey (2008) report only included shallow test pits within the vicinity of the proposed gas pipeline alignment. The previous 2008 Coffey report was used as reference for the geotechnical interpretation of the subsurface for slope stability analysis (see Section 7). Relevant investigation points include test pits (CTP10, CTP13, CTP14, CTP16 and CTP30) located within the vicinity of Abernethy's Creek.
 - The SMEC (2020) report as reference for the subsurface condition due to availability of deeper boreholes and CPT's in this report.
- Develop the various load combinations based on client provided information, and consistent with the loading criterion adopted in the SMEC (2020) report.

- Perform analysis iterations and assess factor of safety (FoS), taking into account the proposed gas line trench, based on normal and flood conditions.

7.3 Assumptions

Assumptions made in undertaking the slope stability analyses are as follows:

- Subsurface conditions are based on Section A and D slope stability models in the SMEC (2020) report.
- The geometry, extent and properties of materials of the embankment at Section A, and the magnitude and locations of different loads for section A are based on the design provided in SMEC (2020) report.
- The geometry, extent and properties of materials of the third rail embankment, and the magnitude and location of different loads for Section D are based on similar assumptions included in section 4.3 in the GHD (2020) report.
- During trench excavation for gas pipeline installation, heavy equipment may be positioned along the perimeter road and will be represented by a 20 kPa load applied on the perimeter road. Construction loads are assumed to be represented and will not exceed this loading assumption.
- Any additional loading upslope (towards the perimeter road) and downslope (towards Abernethy's Creek) of the trench during construction, which are not represented by the previous bullet point (20 kPa load applied on the perimeter road), will need to be analysed at the time of construction. These possible additional loads include stockpiles, gas pipeline material, excavated material, cranes, individual heavy plant and other heavy equipment.
- The perimeter road will be founded on a structural fill embankment. However, consistent with the SMEC (2020) design, it appears that this embankment will not be constructed with a drainage layer and will not be subjected to preloading. If this is the case the road may settle differentially relative to the rail sidings.
- The preloading surcharge will involve the placement of a significant volume of fill over the structural fill placed for the rail embankments and will extend over the perimeter road formation while in place. It is assumed that SMEC has considered the rate of placement of the surcharge and subsequent likely settlement of the perimeter road formation.
- We understand the gas pipeline will not be installed prior or during preloading duration to avoid any differential settlement.
- We have not conducted settlement/consolidation analysis for the third rail siding embankment, perimeter road and on the trench excavation post reinstatement.
- If the creek bank profile changes significantly (e.g., by erosion causing collapse or undercutting of bank, formation of a steeper profile below water, or significant loss of vegetation over the banks), then the stability of the creek bank should be re-assessed.
- If the overall embankment formation between the Packing Plant and Abernethy's Creek (e.g., thickness of the structural fill material, geometry) changes from the current design, then the stability of the embankment and the creek bank should be re-assessed.

7.4 Results

The results of the stability analyses undertaken are summarised in Table 7.1 below, including resulting Factors of Safety (FoS) for the different sections and groundwater conditions, and the required minimum FoS. The required minimum FoS are reasonable values for the embankment life stage and groundwater conditions which are consistent with the SMEC (2020) report.

We note that the FoS values for section A that include the trench excavation are lower compared to section A without trench excavation which is expected. The FoS values for section D with trench excavation is higher than section D without trench excavation, due to the slip surface in the former intersecting the perimeter road embankment.

Slope *MW* analysis models and analysis outputs are included in Appendix I.

Table 7.1 *Summary of slope stability analyses*

Scenario No.	Section	Groundwater condition	FoS with trench excavation	FoS without trench excavation	Required minimum FoS
1	A	Normal	2.33	2.64	1.30
2	A	Flood	1.53	1.60	1.20
3	D	Normal	1.84	1.73	1.50
4	D	Flood	1.71	1.61	1.20

Notes:

[1] See SMEC (2020) report, section A, short term stability models. A copy of the relevant stability models is included in Appendix H.

[2] See GHD (2021) report, section D, short term stability models. A copy of the relevant stability models is included in Appendix H.

7.5 Conclusion

The analyses show that the failure scenarios are driven by slope instability within the rail embankment and are limited to the perimeter road embankment. All scenarios considered have an FoS greater than the required minimum, indicating stable conditions based on the current design of the rail embankment and proposed trench excavation depth for the gas pipeline construction.

Hence, we conclude that excavation of 1 m deep trench for the gas pipeline construction within the Packing Plant development will not adversely affect the stability of the western bank of Abernethy's Creek.

The slope stability analyses are based on the assumptions outlined above. If any aspects of the assumptions made are incorrect or significant changes occur to the current site conditions or proposed development, then GHD should be notified, and the analyses should be re-assessed.

8. Discussion and conclusions

8.1 Geotechnical

The objective of the geotechnical assessment was to advise on the effects of a trench excavation in relation to the construction of gas pipeline on the stability of the western bank of Abernethy's Creek. This assessment has shown that the factor of safety in respect to the stability of the creek bank, following excavation of 1 m deep trench for the gas pipeline construction, in conjunction with the rail and Packing Plant development described in Section 7.3 of this report, is acceptable for the long-term condition, and therefore will not influence the stability of the western bank of Abernethy's Creek.

Other geotechnical aspects relating to the gas pipeline alignment that should be considered in the design, construction and ongoing operation of the Packing Plant and associated infrastructure include:

- The extent of settlement over the rail siding and adjacent land, and the gas pipeline alignment, including long term settlement and differential settlement.
- It is assumed any construction related load will be limited to 20 kPa applied within the road perimeter. Any additional construction load that may be placed upslope or downslope of the gas pipeline alignment will have to be analysed (i.e., cranes, stockpiles of excavated materials).
- Increased loading over the ground surface, ground disturbances or changes in the site surface profile between the proposed packing plant development area and Abernethy's Creek may adversely influence settlement and local and /or general stability.

8.2 Contamination

Site history information indicated that prior to 1950, the site and surrounding areas were possibly used for rural land use. In 2008, horses were agisted within the grass paddocks. Apart from a possible farmhouse, structures immediately west of Abernethy's Creek, installation of the sewer main in the 1960's and sewer pump station, the site and surrounding areas remained generally undeveloped until 2012. From 2012, fill was progressively imported to the site and surrounding areas, initially for the construction of a gravel hardstand carpark, then for the proposed packing plant between 2018 and 2021. The fill imported to the site comprised road base gravel, latite drainage gravel and clay with shale and gravel. The road base and drainage gravel were sourced from local quarries, whilst the clay was sourced from the Nowra Gaol development site. The imported fill was assessed and classified as VENM.

Previous investigations did not identify soil contamination at the site that exceeded commercial / industrial assessment criteria (NEPC, 2013). For groundwater, lead and zinc concentrations exceeded the adopted assessment criteria (ANZECC/ARMCANZ, 2000). The source of zinc and lead was not identified but could have been associated with background concentrations. Faecal coliform concentrations were below the reporting limit suggesting leaks from the sewer main were not occurring in the vicinity of the groundwater monitoring well. It was concluded that the heavy metal impacts were not significant and did not warrant further investigation (ES, 2016).

In 2016, a site audit for the proposed packing plant development site was required to satisfy condition 20 of the consent issued by the NSW Minister for Planning and was therefore a statutory audit under the CLM Act 1997. The SAR concluded that based on the results of previous investigation and subsequent remediation and validation of TRH and asbestos impacts that were identified west of the current investigation area (i.e., CTP28 – off-site), that the packing plant development site, which includes the current investigation site, was suitable for commercial / industrial land use.

Based on previous and current investigation results, potential for contamination was identified in three areas of environmental concern (AECs), which included:

- AEC 1: Potential weathering of hazardous building materials and demolition of site structures, and possible storage and use of chemicals (e.g., fuels, oils, pesticides).
- AEC 2: Fill of unknown quality and origin.

- AEC 3: Leaks from sewer line and nearby sewage treatment plant. Potential asbestos used in sewer main pipe and historical damage.

Based on review of the potential source-pathway-receptor (SPR) linkages, the proposed development and future site works may provide direct contact / inhalation (i.e., vapours, dust) exposure opportunities for human and ecological receptors to contamination, if present within these AECs. Based previous and current investigation results, the likelihood for contamination to exist at the site is assessed as low. Therefore, due to the likely absence of contamination at the site, the SPR linkages are considered incomplete. No further investigation is warranted.

Although the likelihood for contamination was assessed as low, it is recommended that a Construction Environmental Management Plan (CEMP) be prepared to manage the occurrence of potential contamination, buried waste, demolition waste, ACM, etc. in all parts of the site during construction. The CEMP should also include an Unexpected Finds Protocol (UFP).

8.3 Acid sulfate soil

Based on previous investigation results, ASS are likely to be encountered within the proposed packing plant site, particularly the lower lying areas, in the north and east. Soft to very soft soils were encountered approximately 15 m west of Abernethy's Creek, to depths between 4.0 m and 9.8 m bgl. The clays were estuarine and described as dark grey high plasticity with silts, sands and shell fragments. The eastern and north-eastern portion of the proposed gas pipeline passes through these soft soil areas and likely to intercept ASS, and groundwater.

An acid sulfate soil management plan (ASSMP) should be prepared to appropriately manage the disturbance of ASS and mitigating potential acid generation and impacts to groundwater and adjacent waterbodies.

9. References

- ANZECC/ARMCANZ. (2000). *Australian Water Quality Guidelines for Fresh and Marine Water Quality*. Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, Canberra, October 2000.
- Boral. (2021). *Type of material – 20/70 Drainage ex Dunmore. Qty 14kt. Project – Ex Bin (dated 18 June 2021)*. Boral Limited.
- CLM Act. (1997). *Contaminated Land Management Act 1997*.
- Coffey. (2008). *Preliminary Environmental Site Assessment and Geotechnical Investigation, Proposed Ethanol Expansion, Shoalhaven Starches Plant, Bolong Road, Bomaderry, NSW. (Report reference: ENVIWOLL00111AA-R02, dated 25 June 2008)*. Coffey Environments Pty Ltd.
- DECCW. (2010). *1:100,000 Kiama Soil Landscape Series Sheet 9028, 1st Ed*. Department of Environment, Climate Change and Water.
- DLWC. (1997). *Acid Sulfate Soil Risk Map - Burrier-Berry 1:25,000, 2nd Ed*. Department of Land and Water Conservation.
- DLWC. (2002). *Site Investigations for Urban Salinity*. Sydney: Department of Land and Water Conservation.
- ENRS. (2018). *Virgin Excavated Natural Material (VENM) Certificate, 55 The Links Road, Nowra Hill, NSW, 2540 (Ref: ENRS0881, dated 16/3/2021)*. ENRS Pty Ltd.
- ES. (2016). *Contaminated Site Audit, Proposed Packing Plant, Shoalhaven Starches Expansion Project, Bolong Road, Bomaderry, NSW, Lot 16 DP1121337 & Lot 2 DP538289 (Ref: TNC075, dated 6 July 2016)*. Environmental Strategies Pty Ltd.
- GHD. (2020). *Proposal for Modifications to Existing Ethanol Distillery, Shoalhaven Starches, Geotechnical, Contamination, Acid Sulphate Soil and Riverbank Stability Assessment (Ref: 12534283-80928-18, 11/9/2020)*. GHD Pty Ltd.
- GHD. (2021). *Packing Plant, Shoalhaven Starches (MOD21) - Geotechnical Assessment including Creek Bank Stability - Abernethy's Creek (Ref: 12548413-74442-9, 27/5/2021)*. GHD Pty Ltd.
- LEP. (2014). *Shoalhaven City Council, Local Environment Plan*. Shoalhaven City Council.
- Lotsearch. (2020). *Lotsearch Aerials (ref: LS013205EA, dated 30 June 2020)*. Lotsearch Pty Ltd.
- NEPC. (2013). *National Environmental Protection (Assessment of Site Contamination) Measure 1999, as amended in 2013, National Environment Protection Council*.
- NHMRC/ARMCANZ. (2004). *Australian Drinking Water Guidelines*.
- NSW Department of Mines. (1966). *1:250,000 Wollongong Geological Series Sheet (S1 56-9, 2nd Edition)*. NSW Department of Mines.
- NSW EPA. (2014). *The excavated natural material order 2014*. NSW EPA.
- NSW EPA. (2020). *Consultants reporting on contaminated land – Contaminated land guidelines*.
- NSW EPA. (2020). *Letter Clarifying NSW EPA's position on requirement for quarries to provide VENM certificates (dated 6 March 2020)*. NSW EPA.
- NSW Government. (2020). Retrieved from SIX Viewer: <https://maps.six.nsw.gov.au/>
- Olszowy, H., Torr, P., & Imray, P. (1995). *Trace Element Concentrations in Soils from Rural and Urban Areas of Australia, Contaminated Sites Monograph Series No. 4*. South Australian Health Commission.
- POEO. (1997). *Protection of the Environment Operations Act 1997*.
- SMEC. (2020). *Report - Manildra Design and Construction Services - Packing Plant Soft Soil Improvement Design*. Ref: 3001550, dated 4 June 2020.

Appendix A

General Notes

GENERAL NOTES



GHD

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The report contains the results of a geotechnical investigation or study conducted for a specific purpose and client. The results may not be used or relied on by other parties, or used for other purposes, as they may contain neither adequate nor appropriate information. In particular, the investigation does not cover contamination issues unless specifically required to do so by the client.

To the maximum extent permitted by law, all implied warranties and conditions in relation to the services provided by GHD and the report are excluded unless they are expressly stated to apply in the report.

TEST HOLE LOGGING

The information on the test hole logs (boreholes, test pits, exposures etc.) is based on a visual and tactile assessment, except at the discrete locations where test information is available (field and/or laboratory results). The test hole logs include both factual data and inferred information. Moreover, the location of test holes should be considered approximate, unless noted otherwise (refer report). Reference should also be made to the relevant standard sheets for the explanation of logging procedures (Soil and Rock Descriptions, Core Log Sheet Notes etc.).

GROUNDWATER

Unless otherwise indicated, the water depths presented on the test hole logs are the depths of free water or seepage in the test hole recorded at the given time of measuring. The actual groundwater depth may differ from this recorded depth depending on material permeabilities (i.e. depending on response time of the measuring instrument). Further, variations of this depth could occur with time due to such effects as seasonal, environmental and tidal fluctuations or construction activities such as a change in ground surface level. Confirmation of groundwater levels, phreatic surfaces or piezometric pressures can only be made by appropriate surveys, instrumentation techniques and monitoring programmes.

INTERPRETATION OF RESULTS

The discussion or recommendations contained within this report normally are based on a site evaluation from discrete test hole data, often with only approximate locations (e.g. GPS). Generalised, idealised or inferred subsurface conditions (including any geotechnical cross-sections) have been assumed or prepared by interpolation and/or extrapolation of these data. As such these conditions are an interpretation and must be considered as a guide only.

CHANGE IN CONDITIONS

Local variations or anomalies in ground conditions do occur in the natural environment, particularly between discrete test hole locations or available observation sites. Additionally, certain design or construction procedures may have been assumed in assessing the soil-structure interaction behaviour of the site. Furthermore, conditions may change at the site from those encountered at the time of the geotechnical investigation through construction activities and constantly changing natural processes.

Any change in design, in construction methods, or in ground conditions as noted during construction, from those assumed or reported should be referred to GHD for appropriate assessment and comment.

GEOTECHNICAL VERIFICATION

Verification of the geotechnical assumptions and/or model is an integral part of the design process - investigation, construction verification, and performance monitoring. Variability is a feature of the natural environment and, in many instances, verification of soil or rock quality, or foundation levels, is required. There may be a requirement to extend foundation depths, to modify a foundation system and/or to conduct monitoring as a result of this natural variability. Allowance for verification by appropriate geotechnical personnel must be recognised and programmed for construction.

FOUNDATIONS

Where referred to in the report, the soil or rock quality, or the recommended depth of any foundation (piles, caissons, footings etc.) is an engineering estimate. The estimate is influenced, and perhaps limited, by the fieldwork method and testing carried out in connection with the site investigation, and other pertinent information as has been made available. The material quality and/or foundation depth remains, however, an estimate and therefore liable to variation. Foundation drawings, designs and specifications should provide for variations in the final depth, depending upon the ground conditions at each point of support, and allow for geotechnical verification.

REPRODUCTION OF REPORTS

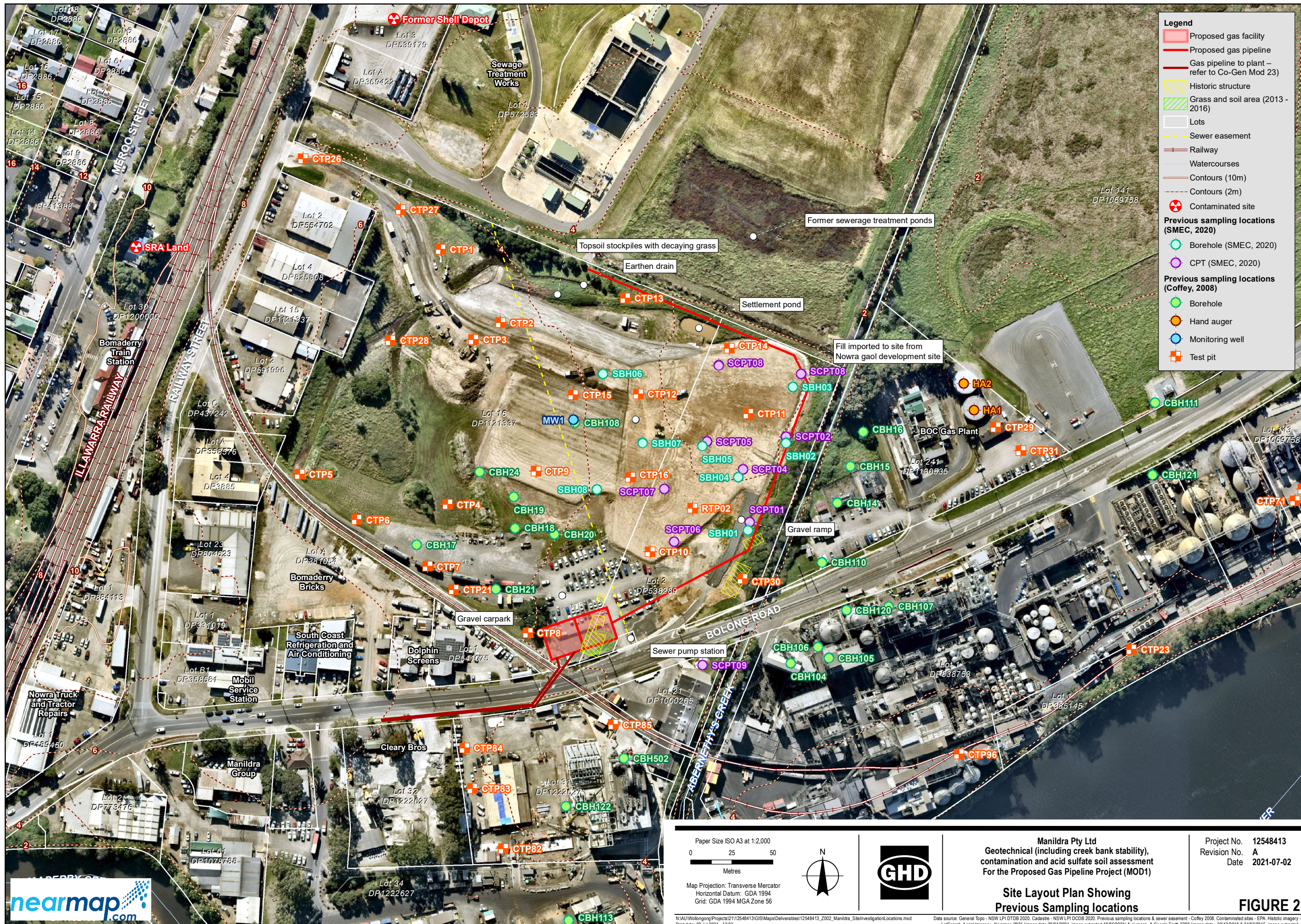
Where it is desired to reproduce the information contained in our geotechnical report, or other technical information, for the inclusion in contract documents or engineering specification of the subject development, such reproductions must include at least all of the relevant test hole and test data, together with the appropriate Standard Description sheets and remarks made in the written report of a factual or descriptive nature.

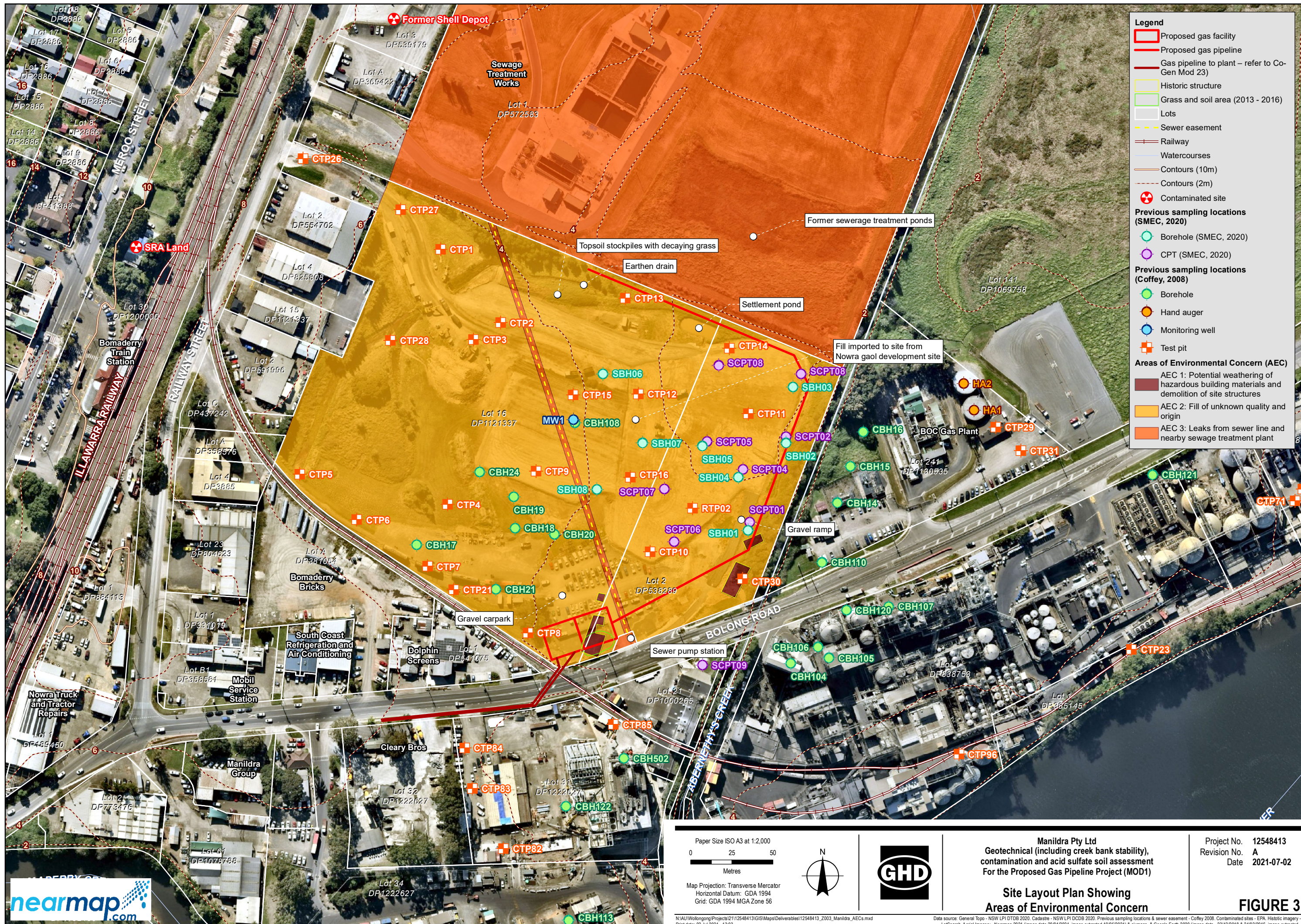
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Appendix B

Figures

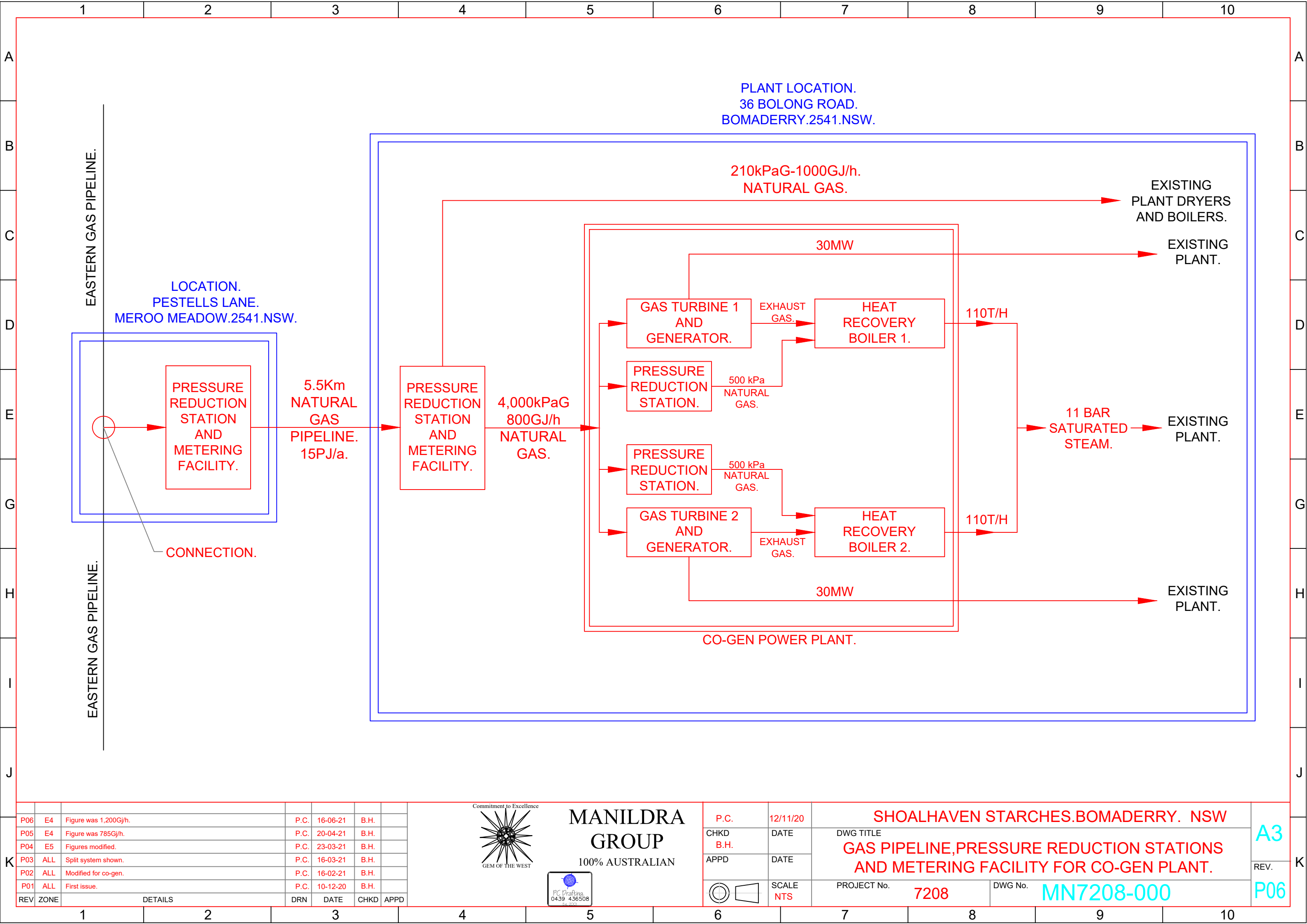


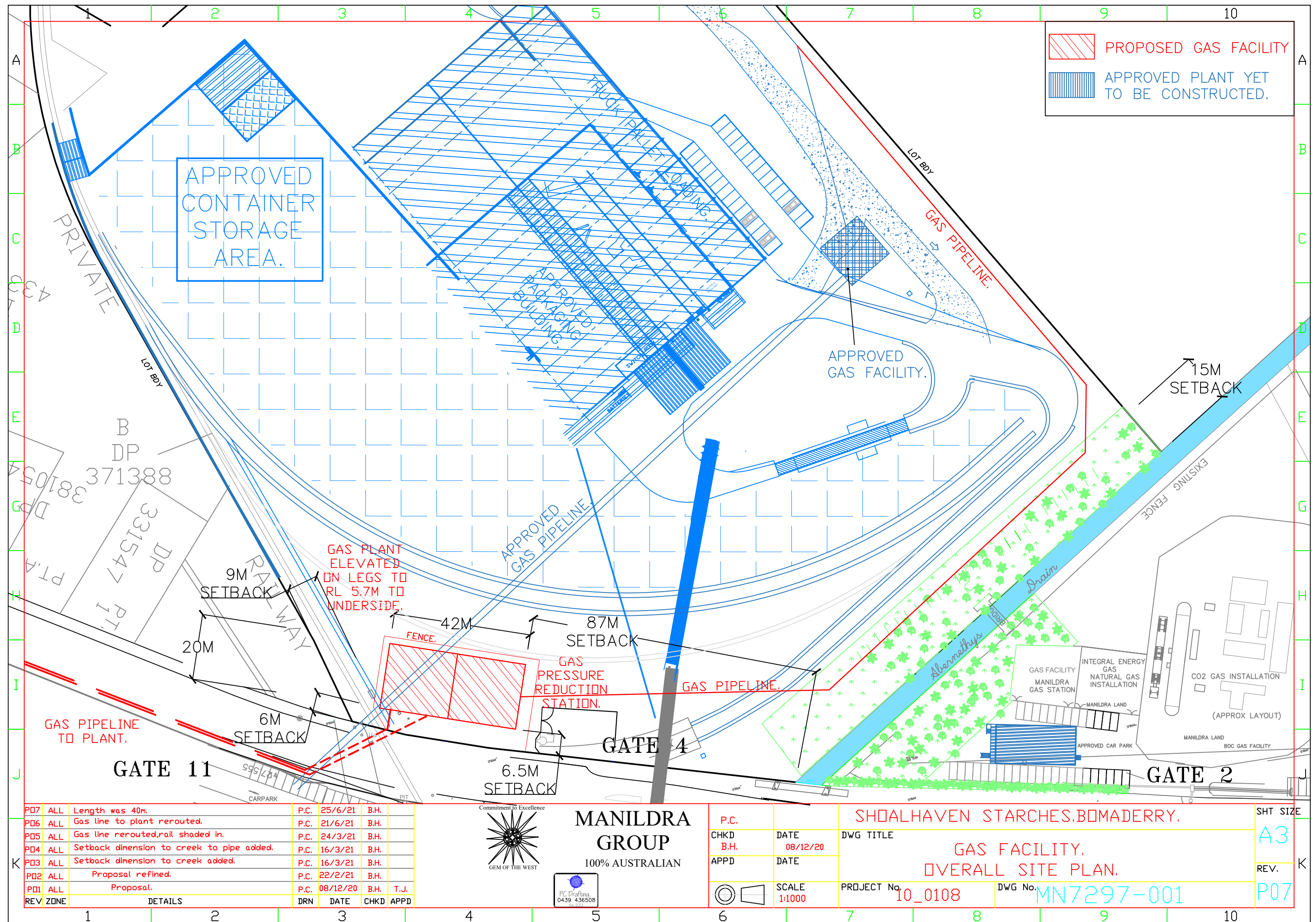


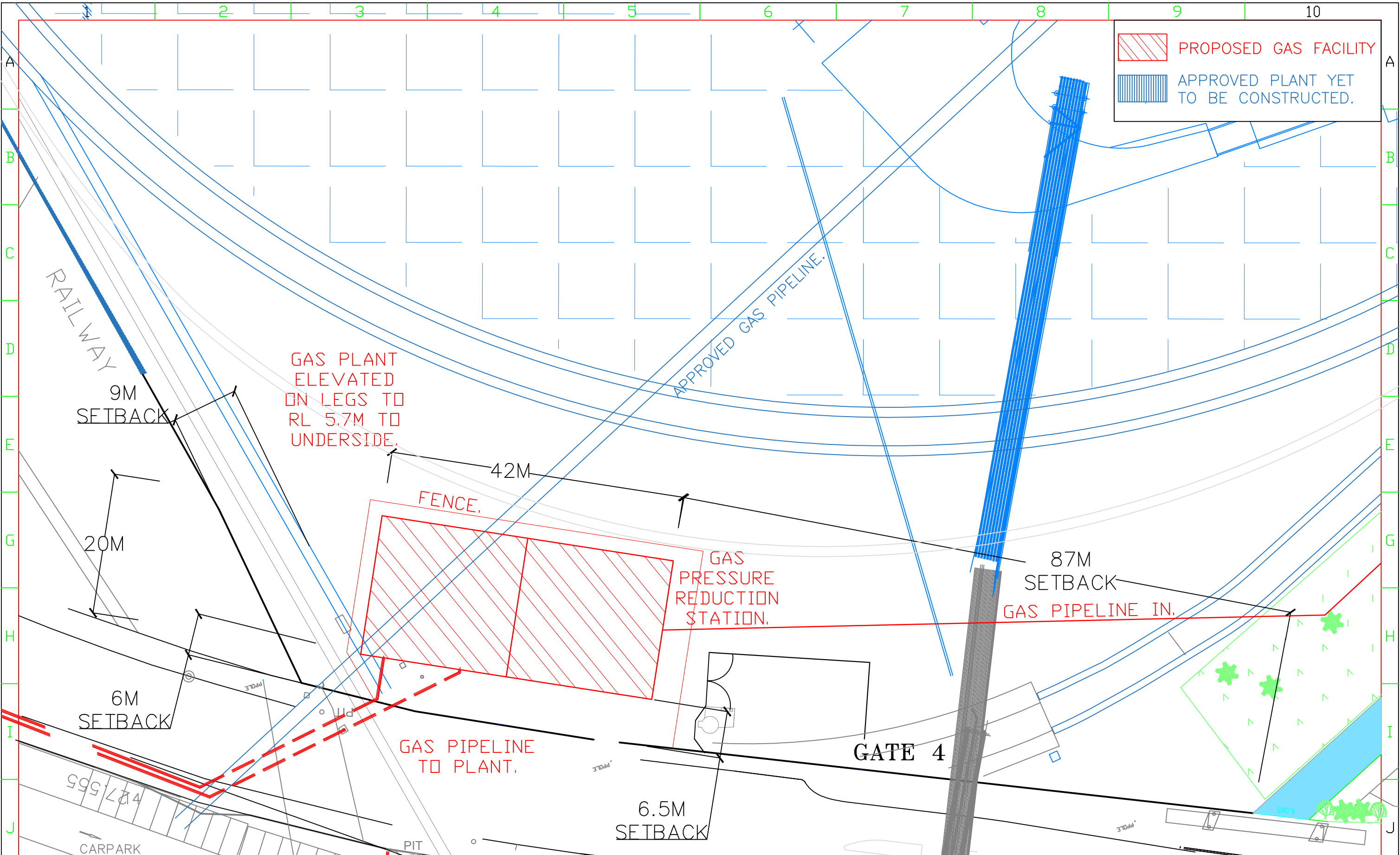


Appendix C

Proposed development drawings

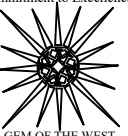






PD6 ALL Length was 40m.			P.C.	25/6/21	B.H.	
PD5 ALL Gas line to plant rerouted.			P.C.	21/6/21	B.H.	
PD4 ALL Gas line rerouted,rail shaded in.			P.C.	24/3/21	B.H.	
PD3 ALL Setback dimension to creek added.			P.C.	16/3/21	B.H.	
PD2 ALL Proposal refined.			P.C.	22/2/21	B.H.	
PD1 ALL Proposal.			P.C.	08/12/20	B.H.	T.J.
REV	ZONE	DETAILS	DRN	DATE	CHKD	APPD
	1	2	3	4	5	6

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PC Drafting

0439 436508

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P.C.	DATE	SHOALHAVEN STARCHES,BOMADERRY.	
CHKD	DATE	DWG TITLE	
B.H.	08/12/20	GAS FACILITY, SITE PLAN.	
APPD	DATE	PROJECT No.	
		10_0108 MN7297-002	
	SCALE		
	1:500		

A3

REV.

P06

Appendix D

Aerial photographs



LOTSEARCH

LOTSEARCH AERIALS

Date: 30 Jun 2020

Reference: LS013205 EA

Address: 160 Bolong Road, Bomaderry, NSW 2541

Aerial Imagery 2019

160 Bolong Road, Bomaderry, NSW 2541

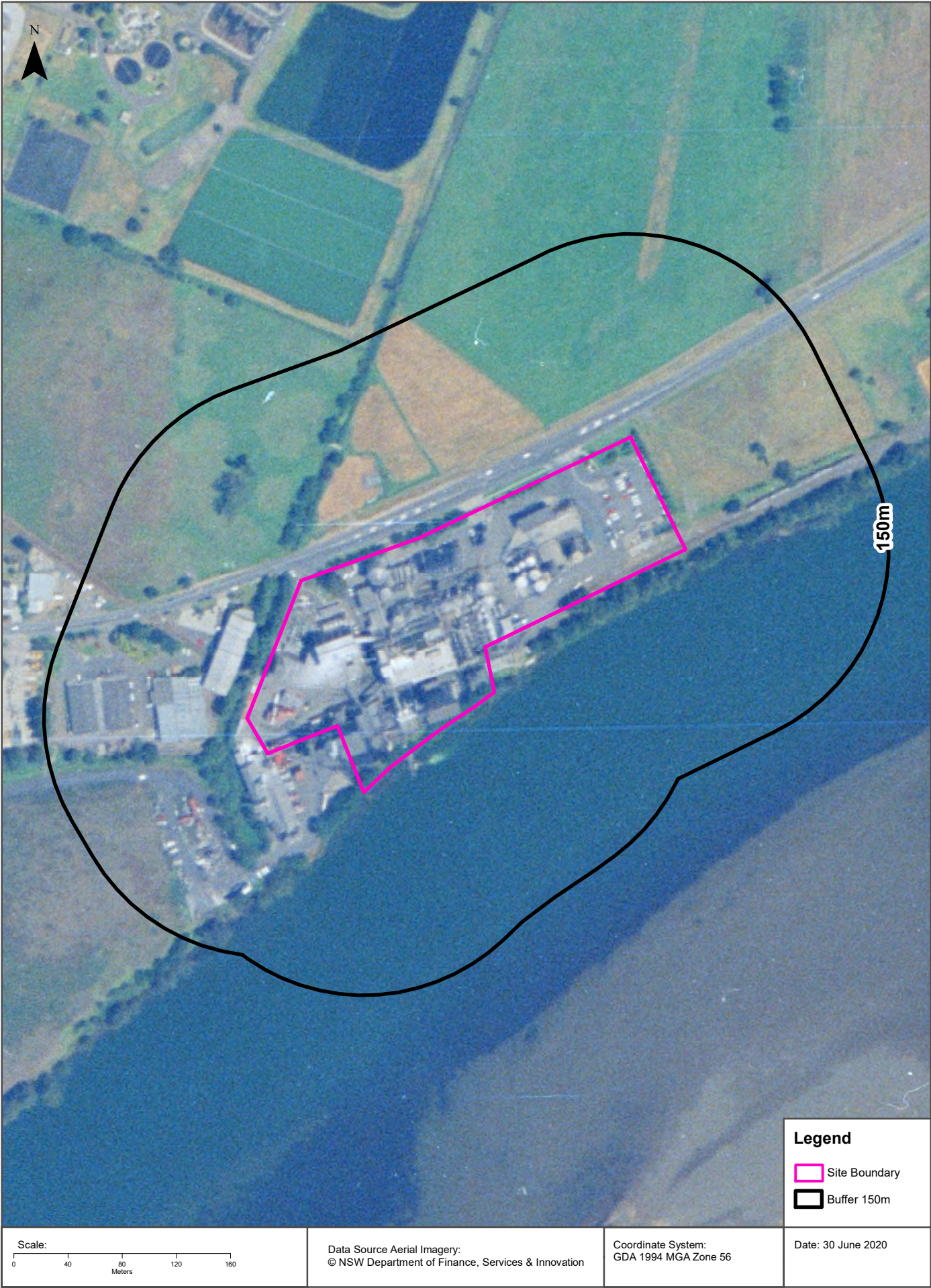


Aerial Imagery 2012

160 Bolong Road, Bomaderry, NSW 2541



Scale: 0 40 80 120 160 Meters	Data Source Aerial Imagery: © NSW Department of Finance, Services & Innovation	Coordinate System: GDA 1994 MGA Zone 56	Date: 30 June 2020
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Aerial Imagery 1984

160 Bolong Road, Bomaderry, NSW 2541





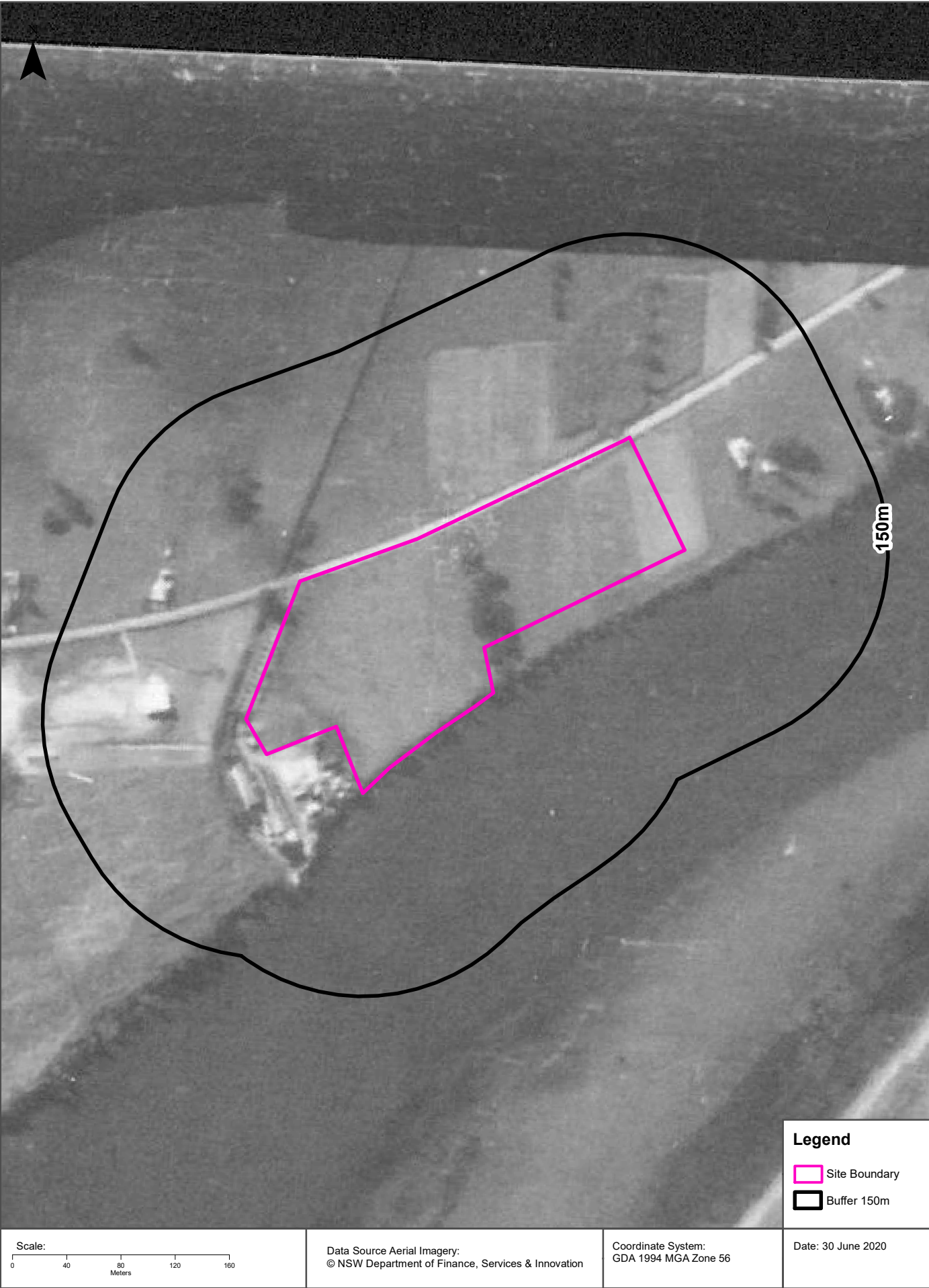






Aerial Imagery 1949

160 Bolong Road, Bomaderry, NSW 2541



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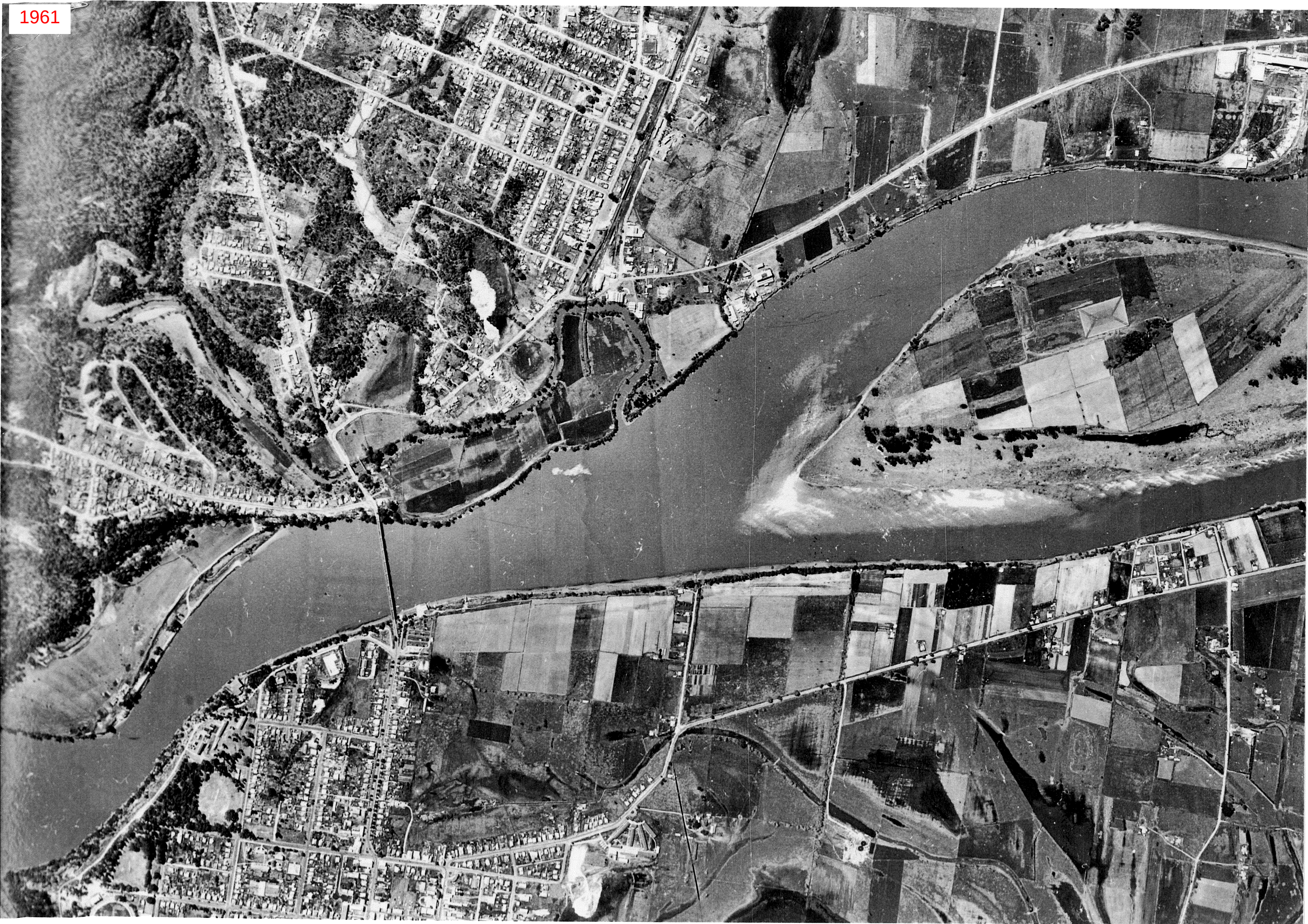
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 - (a) the Report is compiled from or using content (**Third Party Content**) which is comprised of:
 - (i) content provided to Lotsearch by third party content suppliers with whom Lotsearch has contractual arrangements or content which is freely available or methodologies licensed to Lotsearch by third parties with whom Lotsearch has contractual arrangements (**Third Party Content Suppliers**); and
 - (ii) content which is derived from content described in paragraph (i);
 - (b) Neither Lotsearch nor Third Party Content Suppliers takes any responsibility for or give any warranty in relation to the accuracy or completeness of any Third Party Content included in the Report including any contaminated land assessment or other assessment included as part of a Report;
 - (c) the Third Party Content Suppliers do not constitute an exhaustive set of all repositories or sources of information available in relation to the property which is the subject of the Report (**Property**) and accordingly neither Lotsearch nor Third Party Content Suppliers gives any warranty in relation to the accuracy or completeness of the Third Party Content incorporated into the report including any contaminated land assessment or other assessment included as part of a Report;
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 - (g) neither Lotsearch nor Third Party Content Suppliers warrants that all land uses or features whether past or current are identified in the Report;
 - (h) the Report does not include any information relating to the actual state or condition of the Property;
 - (i) the Report should not be used or taken to indicate or exclude actual fitness or unfitness of Land or Property for any particular purpose
 - (j) the Report should not be relied upon for determining saleability or value or making any other decisions in relation to the Property and in particular should not be taken to be a rating or assessment of the desirability or market value of the property or its features; and
 - (k) the End User should undertake its own inspections of the Land or Property to satisfy itself that there are no defects or failures
2. The End User may not make the Report or any copies or extracts of the report or any part of it available to any other person. If End User wishes to provide the Report to any other person or make extracts or copies of the Report, it must contact the purchaser of the Report before doing so to ensure the proposed use is consistent with the contract terms between Lotsearch and the purchaser.
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 - (c) releases each Third Party Content Supplier from any claim it may have otherwise had in connection with the Report, or the negotiation of, entry into, performance of, or termination of these Terms.
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 6. End User must not remove any copyright notices, trade marks, digital rights management information, other embedded information, disclaimers or limitations from the Report or authorise any person to do so.
 7. End User acknowledges and agrees that Lotsearch and Third Party Content Suppliers retain ownership of all copyright, patent, design right (registered or unregistered), trade marks (registered or unregistered), database right or other data right, moral right or know how or any other intellectual property right in any Report or any other item, information or data included in or provided as part of a Report.
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 9. Subject to paragraph 6, Lotsearch excludes liability to End User for loss or damage of any kind, however caused, due to Lotsearch's negligence, breach of contract, breach of any law, in equity, under indemnities or otherwise, arising out of all acts, omissions and events whenever occurring.
 10. Lotsearch acknowledges that if, under applicable State, Territory or Commonwealth law, End User is a consumer certain rights may be conferred on End User which cannot be excluded, restricted or modified. If so, and if that law applies to Lotsearch, then, Lotsearch's liability is limited to the greater of an amount equal to the cost of resupplying the Report and the maximum extent permitted under applicable laws.
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 - (b) any loss of profit, loss of revenue, loss of interest, loss of data, loss of goodwill or loss of business opportunities, business interruption arising directly or indirectly out of or in relation to the Report or these Terms,irrespective of how that liability arises including in contract or tort, liability under indemnity or for any other common law, equitable or statutory cause of action or otherwise.
 12. These Terms are subject to New South Wales law.

1960's



1961



1974



1979



1984



1984



1993



2002



Appendix E

NSW EPA Registers

Public registers

+ POEO Public Register

– Contaminated land record of notices

About the record of notices

List of notified sites

Tips for searching

Disclaimer

Dangerous goods licences

Pesticide licences

Radiation licences

[Home](#) [Public registers](#) [Contaminated land record of notices](#)

Search results

Your search for: LGA: SHOALHAVEN CITY COUNCIL

Matched 14 notices relating to 3 sites.

[Search Again](#)

[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
BOMADERRY	320 Princes HIGHWAY	Commercial Land	2 current
NOWRA	Lamonds LANE	Former gasworks	1 current and 5 former
NOWRA EAST	Lot 3 Kalandar STREET	Mobil Service Station	6 former

Page 1 of 1

9 May 2021

Background

A strategy to systematically prioritise, assess and respond to notifications under Section 60 of the *Contaminated Land Management Act 1997* (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under *Government Information (Public Access) Act 2009*.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

After receiving a report, the first step is to confirm that the report does not relate to a pollution incident. The Protection of the Environment Operations Act 1997 (POEO Act) deals with pollution incidents, waste stockpiling or dumping. The EPA also has an incident management process to manage significant incidents (<https://www.epa.nsw.gov.au/reporting-and-incidents/incident-management>).

In many cases, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any significant risks for the community or environment. Such sites may still need to be cleaned up, but this can be done in conjunction with any subsequent building or redevelopment of the land. These sites do not require intervention under the CLM Act, and are dealt with through the planning and development consent process. In these cases, the EPA informs the local council or other planning authority, so that the information can be recorded and considered at the appropriate time (<https://www.epa.nsw.gov.au/your-environment/contaminated-land/managing-contaminated-land/role-of-planning-authorities>).

Where indications are that the contamination could cause actual harm to the environment or an unacceptable offsite impact (i.e. the land is 'significantly contaminated'), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site. If the reported contamination could present an immediate or long-term threat to human health NSW Health will be consulted. SafeWork NSW and Water NSW can also be consulted if there appear to be occupational health and safety risks or an impact on groundwater quality.

As such, the sites notified to the EPA and presented in the list of contaminated sites notified to the EPA are at various stages of the assessment and remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The list provides an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the person who notified the site.

The following questions and answers may assist those interested in this issue.

Frequently asked questions

Why does my land appear on the list of notified sites?

Your land may appear on the list because:

- the site owner and/or the polluter has notified the EPA under section 60 of the CLM Act
- the EPA has been notified via other means and is satisfied that the site is or was contaminated.

If a site is on the list, it does not necessarily mean the contamination is significant enough to regulate under the CLM Act.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that EPA is aware of. If a site is not on the list, it does not necessarily mean the site is not contaminated.

The EPA relies on responsible parties and the public to notify contaminated sites.

How are notified contaminated sites managed by the EPA?

There are different ways the EPA can manage notified contaminated sites. Options include:

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- managing the site under the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.

There are specific cases where contamination is managed under a tailored program operated by another agency (for example, the Resources & Geoscience's Legacy Mines Program).

What should I do if I am a potential buyer of a site that appears on the list?

You should seek advice from the seller to understand the contamination issue. You may need to seek independent contamination or legal advice.

The information provided in the list is indicative only and a starting point for your own assessment. Land contamination from past site uses is common, mainly in urban environments. If the site is properly remediated or managed, it may not affect the intended future use of the site.

Who can I contact if I need more information about a site?

You can contact the Environment Line at any time by calling 131 555 or by emailing info@environment.nsw.gov.au.

List of NSW Contaminated Sites Notified to the EPA

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You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	Explanation
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or <i>Protection of the Environment Operations Act 1997</i> .
Under Preliminary Investigation Order	The EPA has issued a Preliminary Investigation Order under s10 of the <i>Contaminated Land Management Act 1997</i> , to obtain additional information needed to complete the assessment.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the <i>Contaminated Land Management Act 1997</i> is not required.

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Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
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Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BLACKMANS FLAT	Mount Piper Extension Development Site	2847 Boulder ROAD	Other Industry	Regulation under CLM Act not required	-33.35619968	150.0279881
BLACKMANS FLAT	Western Coal Services (former Lamberts	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.36713827	150.0483236
BLACKTOWN	Former Caltex Service Station	131 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.75866104	150.8962614
BLACKTOWN	Valspar Blacktown	4 Steel STREET	Chemical Industry	Regulation under CLM Act not required	-33.75425018	150.9127714
BLACKTOWN	Harpers Bush (Reserve 752)	Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.79119448	150.8967838
BLACKTOWN	7-Eleven Service Station	60 Walters ROAD	Service Station	Regulation under CLM Act not required	-33.77599783	150.8948926
BLAKEHURST	Woolworths Service Station Blakehurst	390 Princes HIGHWAY	Service Station	Contamination currently regulated under	-33.99019694	151.1135663
BLAKEHURST	The Bay Nursing Home	392 & 394 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.99030465	151.1140293
BLAXLAND	7-Eleven (former Mobil) Service Station	137 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.74627	150.6137669
BOAMBEE	Lindsay Bros transport depot site	542 Pacific HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-30.33106848	153.0802985
BOAMBEE	BP-branded (former Mobil) Boambee Ser	601 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-30.33544287	153.0817266
BOBS FARM	Bob's Farm	15 Fenningham Island ROAD	Other Industry	Regulation under CLM Act not required	-32.74867207	152.0316217
BOGGABILLA	Former Caltex Service Station	90 Simpson Street, corner Newell HIGHW	Service Station	Regulation under CLM Act not required	-28.60654029	150.3571056
BOGGABILLA	Lowes (Former Mobil) Depot	Newell HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-28.61023985	150.3529156
BOMADERRY	Caltex Service Station	341 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.84561952	150.5946978
BOMADERRY	Caltex Service Station Bomaderry	246 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.83833824	150.5958799

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
BOMADERRY	Former Mobil Emoleum Depot	7 Victa WAY	Other Petroleum	Regulation under CLM Act not required	-34.84454618	150.6139462
BOMADERRY	Former Shell Depot	44 Railway STREET	Other Petroleum	Regulation under CLM Act not required	-34.85193621	150.6117038
BOMADERRY	SRA Land	Lot 2 Merroo STREET	Unclassified	Regulation under CLM Act not required	-34.85314813	150.6099573
BOMADERRY	Bomaderry Works Depot	10 McIntyre WAY	Other Petroleum	Regulation under CLM Act not required	-34.84576748	150.6131411
BOMADERRY	Commercial Land	320 Princes HIGHWAY	Other Industry	Contamination currently regulated under	-34.84424073	150.5958149
BOMBALA	Caltex Service Station Bombala	159-161 Maybe STREET	Service Station	Regulation under CLM Act not required	-36.91234945	149.2374622
BOMBALA	Former Bright Street Timber Mill	Bright STREET	Other Industry	Regulation under CLM Act not required	-36.91547645	149.2302454
BOMBALA	Caltex Bombala Service Station	High Street corner Stephen STREET	Service Station	Regulation under CLM Act not required	-36.90447935	149.241292
BOMBALA	Prime Pine site	Sandy LANE	Other Industry	Regulation under CLM Act not required	-36.9315425	149.2110959
BOMEN	Caltex Terminal	34 Lewington STREET	Other Petroleum	Regulation under CLM Act not required	-35.0700202	147.4121955
BOMEN	Enirgi Power Storage Recycling	509 Byrnes ROAD	Other Industry	Under assessment	-35.085202	147.404909
BONDI	BP-branded Service Station	185 Bondi ROAD	Service Station	Regulation under CLM Act not required	-33.89432208	151.2647671
BONDI	Caltex Service Station Bondi	51 Bondi ROAD	Service Station	Regulation under CLM Act not required	-33.8936307	151.260001
BONDI JUNCTION	Waverley Bus Depot	1-15 Oxford STREET	Other Industry	Regulation under CLM Act not required	-33.89165341	151.2421246
BONNY HILLS	Bonny View Store	923 Ocean DRIVE	Service Station	Regulation under CLM Act not required	-31.59075636	152.8392935
BONNYRIGG	Metro (Formerly United & AP SAVER) Ser	709 Cabramatta (W) ROAD	Service Station	Regulation under CLM Act not required	-33.89297085	150.8925935

Number	Name	Location	Type	Status	Issued date
1587374		PRINCES HIGHWAY, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	7-Nov-19
1590386		PRINCES HIGHWAY, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	20-Feb-20
1598968		8, 9, 10 & 11 Victa Way, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	22-Oct-20
1602470		PRINCES HIGHWAY, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	18-Nov-20
1606327		PRINCES HIGHWAY, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	4-Mar-21
2534	AUSTRALIAN CO-OPERATIVE FOODS LIMITED	220 BOLONG ROAD, BOMADERRY, NSW 2541	POEO licence	Surrendered	9-Oct-00
1003065	AUSTRALIAN CO-OPERATIVE FOODS LIMITED	220 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	4-Jan-01
1012594	AUSTRALIAN CO-OPERATIVE FOODS LIMITED	220 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	21-Jul-03
1035240	AUSTRALIAN CO-OPERATIVE FOODS LIMITED	220 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	17-May-04
1043465	AUSTRALIAN CO-OPERATIVE FOODS LIMITED	220 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	10-Feb-05
1059795	AUSTRALIAN CO-OPERATIVE FOODS LIMITED	220 BOLONG ROAD, BOMADERRY, NSW 2541	s.80 Surrender of a Licence	Issued	3-May-06
11164	BOC LIMITED	LOT 241 BOLONG ROAD, BOMADERRY, NSW 2541	POEO licence	Issued	12-Dec-00
1035676	BOC LIMITED	LOT 241 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	25-Jun-04
1048156	BOC LIMITED	LOT 241 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	17-Jun-05
1513148	BOC LIMITED	LOT 241 BOLONG ROAD, BOMADERRY, NSW 2541	Compliance Audit	Complete	2-Apr-13
1516480	BOC LIMITED	LOT 241 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	26-Aug-13
1514411	BOC LIMITED	LOT 241 BOLONG ROAD, BOMADERRY, NSW 2541	Compliance Audit	Complete	26-Aug-13
1529674	BOC LIMITED	LOT 241 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	8-Apr-15
1580777	BOC LIMITED	LOT 241 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	25-Jun-19
58	CLEARY BROS (BOMBO) PTY LTD	LOT 3 BOLONG ROAD, BOMADERRY, NSW 2541	POEO licence	No longer in force	19-Nov-99
1009284	CLEARY BROS (BOMBO) PTY LTD	LOT 3 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	6-Aug-01
21029	DOWNER EDI WORKS PTY LTD	PRINCES HIGHWAY, BOMADERRY, NSW 2541	POEO licence	Issued	25-May-18
1567284	DOWNER EDI WORKS PTY LTD	PRINCES HIGHWAY, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	18-Sep-18
1572434	DOWNER EDI WORKS PTY LTD	PRINCES HIGHWAY, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	30-Nov-18
1577345	DOWNER EDI WORKS PTY LTD	PRINCES HIGHWAY, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	19-Mar-19
566	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	POEO licence	Surrendered	15-Feb-00
1004205	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	27-Feb-01
1010261	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	10-Jan-02
1035034	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	5-Mar-04
1044586	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	14-Mar-05
1071922	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	3-Apr-07
1084599	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	2-May-08
1085840	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	27-Jun-08
1516476	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	23-Aug-13
1513902	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	Compliance Audit	Complete	10-Sep-13
1517150	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	17-Sep-13
1531909	PAPER AUSTRALIA PTY LTD	340 BOLONG ROAD, BOMADERRY, NSW 2541	s.80 Surrender of a Licence	Issued	16-Sep-15
20759	QSSR PTY LTD	8, 9, 10 & 11 Victa Way, BOMADERRY, NSW 2541	POEO licence	Issued	7-Oct-16
3173528912	QSSR PTY LTD	8, 9, 10 & 11 Victa Way, BOMADERRY, NSW 2541	Penalty Notice	Issued	9-Apr-20
1735	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	POEO licence	Issued	5-Jan-01
1013003	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	4-Apr-02
1029195	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	14-Aug-03
1048456	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	21-Jun-05
1060655	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	26-Jun-06
1085947	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	16-May-08
1514246	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	Compliance Audit	Complete	25-Jul-14
1526880	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	10-Dec-14
1531920	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	7-Jul-15

1539716	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	11-May-16
1548579	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	19-Jan-17
1573990	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	19-Dec-18
1575832	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	17-Apr-19
1588625	SHOALHAVEN CITY COUNCIL	RAILWAY STREET, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	13-May-20
883	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	POEO licence	Issued	24-Oct-00
1004267	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	4-Apr-01
1007313	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	11-May-01
1015342	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	26-Feb-02
1019838	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	15-Aug-02
1024268	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	11-Feb-03
1026281	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	17-Apr-03
1027489	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	26-Nov-03
1033645	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	1-Mar-04
1036799	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	29-Jun-04
1039275	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	20-May-05
1048817	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	28-Jul-05
1051704	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	31-Oct-05
1054751	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	21-Feb-06
1080589	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	31-Mar-08
1091373	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.96 Prevention Notice	Issued	4-Sep-08
1093973	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	27-Nov-08
1097588	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	10-Feb-09
1098548	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	9-Apr-09
1104957	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	14-Aug-09
1113256	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.91 Clean Up Notice	Issued	3-May-10
1500684	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	4-Aug-11
1501899	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	30-Sep-11
1513143	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	Compliance Audit	Complete	28-Mar-13
1505439	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	8-Nov-13
1521553	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	28-Apr-14
1522954	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	27-Jun-14
1513905	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	Compliance Audit	Complete	25-Jul-14
1523522	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	30-Jul-14
1525338	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	8-Oct-14
1530188	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	23-Jul-15
1536447	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	18-Dec-15
1546622	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	15-Nov-16
3173525621	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	Penalty Notice	Issued	18-May-18
1564529	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	20-Jun-18
1571114	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	23-Oct-18
1599081	SHOALHAVEN STARCHES PTY LTD	160 BOLONG ROAD, BOMADERRY, NSW 2541	Compliance Audit	Complete	21-Aug-20
1559940	SOUTH COAST PLANT HIRE PTY LTD	8, 9, 10 & 11 Victa Way, BOMADERRY, NSW 2541	s.91 Clean Up Notice	Issued	22-Dec-17
3173525310	SOUTH COAST PLANT HIRE PTY LTD	8, 9, 10 & 11 Victa Way, BOMADERRY, NSW 2541	Penalty Notice	Issued	19-Apr-18
3173525704	SOUTH COAST PLANT HIRE PTY LTD	8, 9, 10 & 11 Victa Way, BOMADERRY, NSW 2541	Penalty Notice	Issued	24-May-18
3173525740	SOUTH COAST PLANT HIRE PTY LTD	8, 9, 10 & 11 Victa Way, BOMADERRY, NSW 2541	Penalty Notice	Issued	24-May-18
1576498	SOUTH COAST PLANT HIRE PTY LTD	8, 9, 10 & 11 Victa Way, BOMADERRY, NSW 2541	s.58 Licence Variation	Issued	8-May-19
21178	SUPAGAS PTY LIMITED	220 Bolong Road, BOMADERRY, NSW 2541	POEO licence	Issued	23-Oct-18

Appendix F

Section 10.7 Planning Certificates

PLANNING CERTIFICATE UNDER SECTION 10.7
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979
Certificate No: 2021/02259

Applicant: Colee Colette Quayle
4/39 McKenzie Avenue
Wollongong, NSW, 2500

Receipt No.: Ext: 122130
Date: 10/05/2021
Fee: \$133
Urgency Fee: \$0.00

Applicant reference: 12548413

The land to which this Certificate relates is:
Lot 2 DP 538289, Bolong Rd, BOMADERRY
Parish of BUNBERRA, County of CAMDEN

The above information is as recorded by Council.

DISCLAIMER AND CAUTION:

1. The information on zones, controls etc given below relates to the land for which the certificate was sought. If enquirers wish to know what zones, other controls, etc apply or are proposed on nearby land then they should make enquiries in person at Council's offices.
2. The information contained in this certificate is accurate as at the date of this certificate.
3. In providing this certificate Council has in good faith relied upon information provided to it or sourced from third parties. Where Council has obtained the information from third parties, either exclusively or in conjunction with information held by Council, the Certificate details the source of that third party information. Council cautions persons against relying upon information in the Certificate sourced from third parties as to its accuracy, applicability to specific lands and its currency without verification from the specified third party and, where appropriate, professional advice and the adoption of prudent land acquisition measures and appropriate professional advice. To the full extent permitted by law Council disclaims liability with respect to any information in this Certificate sourced from third parties.

The information contained in this certificate is prepared in accordance with the Environmental Planning and Assessment Act 1979 (as amended) and the Environmental Planning Assessment Regulation 2000 (as amended).

PLANNING CERTIFICATE UNDER SECTION 10.7
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Certificate No: 2021/02259

This is a Planning Certificate issued by Shoalhaven City Council under Section 10.7(2) of the Environmental Planning and Assessment Act 1979 on the application of the person described above in respect of the land described above.

1 Names of relevant planning instruments and DCPs

- (1) The name of each environmental planning instrument that applies to the carrying out of development on the land:

Shoalhaven Local Environmental Plan 2014 (as amended)

State Environmental Planning Policies

Coastal Management 2018. Gazetted 3 April 2018

The policy applies to land within the "coastal zone" and identifies land within the coastal zone as one of four coastal management areas being the coastal wetlands and littoral rainforests area, the coastal vulnerability area, the coastal environment area, and the coastal use area. The policy also sets out matters to be considered when undertaking development in each of the coastal management areas.

Vegetation in Non-Rural Areas. Gazetted 25 August 2017 (& as amended)

Is to protect the biodiversity values of trees and other vegetation in non-rural areas of the State and to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation.

State Environmental Planning Policies affecting the City

State Environmental Planning Policy No. 21 – Caravan Parks

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

State Environmental Planning Policy No. 36 – Manufactured Home Estates

State Environmental Planning Policy No. 50 – Canal Estate Development

State Environmental Planning Policy No. 55 – Remediation of Land

State Environmental Planning Policy No. 64 - Advertising and Signage

State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development

State Environmental Planning Policy No. 70 - Affordable Housing (Revised Schemes)

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004

State Environmental Planning Policy (Building Sustainability Index: Basix) 2004

State Environmental Planning Policy (State Significant Precincts) 2005

State Environmental Planning Policy (Infrastructure) 2007

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

PLANNING CERTIFICATE UNDER SECTION 10.7
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

Certificate No: 2021/02259

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Affordable Rental Housing) 2009
State Environmental Planning Policy (State and Regional Development) 2011
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017
State Environmental Planning Policy (Coastal Management) 2018
State Environmental Planning Policy (Primary Production and Rural Development) 2019
State Environmental Planning Policy (Koala Habitat Protection) 2020
State Environmental Planning Policy (Koala Habitat Protection) 2021

- (2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (not including any proposed instrument where the Secretary has notified the Council that the making of the proposed instrument has been deferred indefinitely or has not been approved) is:

Draft State Environmental Planning Policies

Draft State Environmental Planning Policy (Environment) 2017

Draft State Environmental Planning Policy (Remediation of Land)

Explanation of Intended Effect - State Environmental Planning Policies

Explanation of Intended Effect - Proposed Housekeeping Amendment to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

Explanation of Intended Effect - Proposed Activation Precincts SEPP

Explanation of Intended Effect - Amendment to Infrastructure SEPP

Explanation of Intended Effect - Housing Diversity State Environmental Planning Policy

Explanation of Intended Effect - Design and Place SEPP

Explanation of Intended Effect - Agritourism and small-scale agriculture development. Includes proposed amendments to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

Explanation of Intended Effect - Building Business Back Better (proposed changes to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008).

Explanation of Intended Effect - Review of clause 4.6 of the Standard Instrument LEP

PLANNING CERTIFICATE UNDER SECTION 10.7
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979
Certificate No: 2021/02259

Draft Local Environmental Plans and planning proposals for Local Environmental Plans

PLANNING PROPOSAL - PP026 TO AMEND SHOALHAVEN LOCAL ENVIRONMENTAL PLAN 2014 COASTAL HAZARDS REVIEW - PUBLIC EXHIBITION 6 FEBRUARY 2019 TO 8 MARCH 2019 (55961E) (MIN18.609)

This Planning Proposal (PP) seeks to remove the Coastal Risk Planning Map from Shoalhaven LEP 2014 and rely on Council's Coastal Hazard Interactive Mapping to identify areas at risk of coastal hazards. The PP will also amend Clause 7.4 Coastal risk planning to apply to all land at risk of coastal hazards instead of land identified in the Coastal Risk Planning Map, to allow for better identification and management of areas at risk of coastal hazards.

PLANNING PROPOSAL - PP029 TO AMEND SHOALHAVEN LOCAL ENVIRONMENTAL PLAN 2014 - HITCHCOCKS LANE BERRY RESIDENTIAL INVESTIGATION AREA - PUBLIC EXHIBITION 28 OCTOBER 2020 TO 8 JANUARY 2021 (56367E) (MIN20.619)

This Planning Proposal (PP) seeks to amend the land use zone, minimum lot size for subdivision and height of buildings provisions within Shoalhaven Local Environmental Plan 2014 to enable low density residential development on certain land located south of Hitchcocks Lane in Berry.

PLANNING PROPOSAL - PP035 TO AMEND SHOALHAVEN LOCAL ENVIRONMENTAL PLAN 2014 - 48 JERVIS BAY ROAD FALLS CREEK - COMMUNITY TITLE SUBDIVISION - PUBLIC EXHIBITION 6 JANUARY 2021 TO 5 FEBRUARY 2021 (57076E) (MIN20.253)

This Planning Proposal (PP) seeks to amend the land use zones, minimum lot size for subdivision and terrestrial biodiversity provisions as well as introduce a site-specific legal mechanism within Shoalhaven Local Environmental Plan 2014 to enable a community title subdivision (consisting of 13 housing lots and one neighbourhood environmental conservation lot) on the subject land.

PLANNING CERTIFICATE UNDER SECTION 10.7
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979
Certificate No: 2021/02259

PLANNING PROPOSAL - PP040 TO AMEND SHOALHAVEN LOCAL ENVIRONMENTAL PLAN 2014 - 2018 HOUSEKEEPING AMENDMENT - MAPPING - PUBLIC EXHIBITION 5 MAY 2021 TO 4 JUNE 2021 (58912E) (MIN20.714)

PP040 intends to amend a number of maps within Shoalhaven LEP 2014 to: Correct identified anomalies or inconsistencies in the LEP mapping; Correct administrative errors (e.g. items incorrectly or incompletely identified in mapping); Respond to the registration of new land titles, landowner requests, development assessment processes. The PP also proposes the removal of the mapping associated with clause 5.9 Preservation of Trees or Vegetation as the related clause was repealed from the NSW Standard Instrument LEP and Shoalhaven LEP 2014 in 2017. There are thirty-seven (37) items covering a variety of minor mapping issues relating to minimum lot size, zoning, height, terrestrial biodiversity, bushfire, buffer zones, natural resource sensitivity and land reservation acquisition. The proposed changes will help to improve the overall operation of the plan.

PLANNING PROPOSAL - PP054 TO AMEND SHOALHAVEN LOCAL ENVIRONMENTAL PLAN 2014 - REZONING OF RIPARIAN LAND AT TAYLORS LANE CAMBEWARRA - PUBLIC EXHIBITION 24 MARCH 2021 TO 23 APRIL 2021 (60737E) (MIN20.387)

The Planning Proposal seeks to amend Shoalhaven Local Environmental Plan (LEP) 2014 to rezone part of Lot 1 DP 949932 from E2 Environmental Conservation to R1 General Residential to enable residential development. The PP also seeks to make corresponding changes to lot size controls, the riparian lands and watercourses map and the urban release area (URA) boundary within the LEP to enable the rezoned land to be included within the Moss Vale Road South URA. The subject land is currently identified as a watercourse and riparian corridor. An independent assessment of the identified watercourse and riparian area was undertaken and supports the changes sought by the PP.

- (3) The name of each development control plan that applies to the carrying out of development on the land is:

Shoalhaven Development Control Plan 2014 (as amended)

(Note: a copy of Shoalhaven Development Control Plan 2014 is available on the internet at www.dcp2014.shoalhaven.nsw.gov.au or can be inspected at Council's Nowra office during normal business hours.)

2 Zoning and land use under relevant LEPs

For Shoalhaven Local Environmental Plan 2014 (as amended)

- a. **The identity of the zone in which the land is included under Shoalhaven Local Environmental Plan 2014:**

Zone IN1 General Industrial

- b. **The purposes for which Shoalhaven Local Environmental Plan 2014 provides that development may be carried out within the zone without the need for development consent:**

Nil

- c. **The purposes for which Shoalhaven Local Environmental Plan 2014 provides that development may not be carried out within the zone except with development consent:**

Specialised retail premises; Depots; Freight transport facilities; Garden Centres; General industries; Hardware and Building Supplies; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Neighbourhood shops; Oyster aquaculture; Places of Public Worship; Roads; Take away food and drink premises; Tank-based aquaculture; Timber yards; Warehouse or distribution centres; Any other development not specified in item b or d.

- d. **The purposes for which Shoalhaven Local Environmental Plan 2014 provides that development is prohibited within the zone:**

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Centre-based child care facilities; Correctional centres; Crematoria; Eco-tourist facilities; Educational establishments; Environmental facilities; Exhibition villages; Extractive industries; Farm buildings; Forestry; Function centres; Health services facilities; Highway service centres; Home-based childcare; Home businesses; Home occupations; Home occupations (sex services); Information and education facilities; Marinas; Mooring pens; Moorings; Office premises; Open cut mining; Pond-based aquaculture; Registered clubs; Residential accommodation; Respite day care centres; Restricted premises; Retail premises; Sex services premises; Tourist and visitor accommodation; Water recreation structures; Wharf or boating facilities.

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- e. Development standards applying to the land under Shoalhaven Local Environmental Plan 2014 **DO NOT** fix minimum land dimensions for the erection of a dwelling-house on the land.

- f. The land **DOES NOT** include or comprise critical habitat under Shoalhaven Local Environmental Plan 2014.
(Note: Shoalhaven Local Environmental Plan 2014 does not identify areas of "critical habitat" as defined in Part 7A of the Fisheries Management Act 1994 (subject to section 5AA of the Environmental Planning and Assessment Act 1979). Enquiries about whether the land is "critical habitat" Part 7A of the Fisheries Management Act 1994 should be directed to the NSW Office of Environment and Heritage).

- g. The land **IS NOT** in a conservation area (however described) under Shoalhaven Local Environmental Plan 2014.
(Note: this item relates to "heritage conservation areas" as defined in the LEP).

- h. An item of environmental heritage (however described) under Shoalhaven Local Environmental Plan 2014 **IS NOT** situated on the land.
(Note: "environmental heritage" relates to matters/items of cultural heritage, for example, items listed on the State Register, items specifically listed in the LEP or matters subject to an "interim heritage order" under the Heritage Act 1977).

Other provisions under Shoalhaven Local Environmental Plan 2014 may also apply to the development of this land. You can view the Shoalhaven Local Environmental Plan 2014 at the website www.legislation.nsw.gov.au or at Council's offices.

2A Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

- (a) The land **IS NOT** within any zone (however described) under Part 3 of the State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (the 2006 SEPP), or
- (b) The land **IS NOT** within any Precinct Plan (within the meaning of the 2006 SEPP), or
- (c) The land **IS NOT** within a proposed Precinct Plan that is or has been the subject of community consultation or on public exhibition under the Act.

3 Complying development

Qualifying Statement on Council Data Affecting this Item

Shoalhaven City Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, however specific land restrictions may not apply to all of the land. The information included in this Planning Certificate is provided in accordance with the Environmental Planning & Assessment Regulation 2000 (as amended). It is strongly suggested that you review the State Environmental Planning Policy (Exempt and Complying Developments Codes) 2008 and supporting information before proceeding with the lodgement of a Complying Development Certificate application to either Council or a private certifier. The NSW Department of Planning and Environment has provided a series of information sheets on its website

<http://www.planning.nsw.gov.au/exemptandcomplying>

Note: There are other provisions in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 that must be complied with in order for development on the land to be complying development.

Specific land exemptions for Housing Code, Rural Housing and Greenfield Housing Code

The extent to which the land is land on which complying development may be carried out under the codes of State Environmental Planning Policy (Exempt Complying Development Codes) 2008 **IS RESTRICTED** by the following provisions of clauses 1.17A (1)(c) to (e), (2), (3) and (4), 1.18(1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 but the restriction may not apply to all of the land and Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Under the Housing Code and the Rural Housing Code the land is affected by specific land exemptions -

Clause 1.19(1)(c) & Clause 1.19(5)(c) because the land is identified on an Acid Sulfate Soils Map as being Class 1 or Class 2.

Clause 1.19(1)(e)(i) & Clause 1.19(5)(f)(i) because the land is identified by an environmental planning instrument as being: within a buffer area.

Specific land exemptions for Housing Alterations Code and General Development Code

The extent to which the land is land on which complying development may be carried out under the codes of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 **IS NOT RESTRICTED** by the following provisions of clauses 1.17A (1)(c) to (e), (2), (3) and (4), 1.18(1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 but the restriction may not apply to all of the land, and Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

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Specific land exemptions for Commercial and Industrial (New Buildings and Additions) Code

The extent to which the land is land on which complying development may be carried out under the codes of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 **IS RESTRICTED** by the following provisions of clauses 1.17A (1)(c) to (e), (2), (3) and (4), 1.18(1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 but the restriction may not apply to all of the land and Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Under the General Commercial and Industrial Code the land is affected by specific land exemptions -

Clause 1.19(1)(c) & Clause 1.19(5)(c) because the land is identified on an Acid Sulfate Soils Map as being Class 1 or Class 2.

Clause 1.19(1)(e)(i) & Clause 1.19(5)(f)(i) because the land is identified by an environmental planning instrument as being: within a buffer area.

Specific land exemptions for Low Rise Housing Diversity Code

The extent to which the land is land on which complying development may be carried out under the codes of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 **IS RESTRICTED** by the following provisions of clauses 1.17A (1)(c) to (e), (2), (3) and (4), 1.18(1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 but the restriction may not apply to all of the land and Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Under the Low Rise Housing Diversity Code the land is affected by specific land exemptions -

Clause 1.19(1)(c) & Clause 1.19(5)(c) because the land is identified on an Acid Sulfate Soils Map as being Class 1 or Class 2.

Clause 1.19(1)(e)(i) & Clause 1.19(5)(f)(i) because the land is identified by an environmental planning instrument as being: within a buffer area.

4B Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works

The owner (or any previous owner) of the land **HAS NOT** consented in writing to the land being subject to annual charges under section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

5 Mine subsidence

The land **HAS NOT** been proclaimed to be a mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act 1961.

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6 Road widening and road alignment

- (a) The land **IS NOT** affected by any road widening or road realignment under Division 2 of Part 3 of the Roads Act 1993
- (b) If the land is affected by any road widening or road realignment under any environmental planning instrument it will be listed below.
- (c) The land **IS NOT** affected by any road widening or road realignment under any resolution of Council.

Note: Information in item 6, relates to Council's road proposals; other authorities e.g. NSW Roads and Maritime Services, may have proposals not set out herein.

7 Council and other public authority policies on hazard risk restrictions

- (a) The land **IS** affected by the following policy or policies adopted by the Council that restrict the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulfate soils or any other risk (other than flooding).

Shoalhaven Development Control Plan 2014

Contaminated Land Policy 2013

Shoalhaven Coastal Zone Management Plan 2018

- (b) The land **IS NOT** affected by a policy adopted by a public authority (other than the Council) and notified to the Council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the Council, that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulfate soils or any other risk (other than flooding).

7A Flood related development controls information

(1) Whether or not development on that land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related development controls.

(2) Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

(3) Words and expressions in this clause have the same meanings as in the Standard Instrument.

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(1) Development on the land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) **IS** subject to flood related development controls as contained in Clause 7.3 of Shoalhaven Local Environmental Plan 2014; and/or Chapter G9 of Shoalhaven Development Control Plan 2014.

(2) Development on the land or part of the land for any other purpose **IS** subject to flood related development controls as contained in Clause 7.2A and Clause 7.3 of Shoalhaven Local Environmental Plan 2014; and/or Chapter G9, G10 of Shoalhaven Development Control Plan 2014.

For further information or to request a flood certificate, please contact Council's - City Development.

8 Land reserved for acquisition

The land **IS NOT** reserved for acquisition by a public authority, as referred to in section 3.15 of the Act under any environmental planning instrument, or proposed environmental planning instrument referred to in clause 1.

9 Contributions plans

The name of the contributions plan applying to the land is:

Shoalhaven Contributions Plan 2019 (as amended)

9a Biodiversity certified land

The land **IS NOT** biodiversity certified land under Part 8 of the Biodiversity Conservation Act 2016.

Note: Biodiversity certified land includes land certified under Part 7AA of the Threatened Species Conservation Act 1995 that is taken to be certified under Part 8 of the Biodiversity Conservation Act 2016.

10 Biobanking stewardship sites

The council **HAS NOT** been notified by the Chief Executive of the Office of Environment and Heritage whether or not the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the Biodiversity Conservation Act 2016.

Note: Biodiversity stewardship agreements include biobanking agreements under Part 7A of the Threatened Species Conservation Act 1995 that are taken to be biodiversity stewardship agreements under Part 5 of the Biodiversity Conservation Act 2016.

10a Native vegetation clearing set asides

The land **DOES NOT** contain a set aside area under section 60ZC of the Local Land Services Act 2013.

11 Bush fire prone land

The land **IS NOT** bushfire prone (as defined in the Environmental Planning and Assessment Act 1979).

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12 Property vegetation plans

The Council **HAS NOT** been notified that the land is land to which a property vegetation plan approved under Part 4 of the Native Vegetation Act 2003 (and that continues in force) applies.

13 Orders under Trees (Disputes Between Neighbours) Act 2006

The Council **HAS NOT** been notified that an order has been made under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land.

14 Directions under Part 3A

There is no direction by the Minister in force under section 75P (2) (c1) of the 'Environmental Planning and Assessment Act 1979' that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect.

15 Site compatibility certificates and conditions for seniors housing

The Council **IS NOT** aware of any current site compatibility certificate (seniors housing) in respect of proposed development on the land.

16 Site compatibility certificates for infrastructure, schools or TAFE establishments

The Council **IS NOT** aware of a current site compatibility certificate (Infrastructure) or site compatibility certificate (schools or TAFE establishments), in respect of proposed development on the land.

17 Site compatibility certificates and conditions for affordable rental housing

The Council **IS NOT** aware of a current site compatibility certificate (affordable rental housing), in respect of proposed development on the land.

18 Paper subdivision information

The land **IS NOT** affected by a development plan (proposed or adopted) or subdivision order as defined under Part 16C of the Environmental Planning & Assessment Regulation 2000

19 Site verification certificates

The Council **IS NOT** aware of a current site verification certificate (mining, petroleum production and extractive industries), in respect of this land.

20 Loose-filled asbestos insulation

The land **DOES NOT** include any residential premises (within the meaning of Division 1A of Part 8 of the Home Building Act 1989) that are listed on the register that is required to be maintained under that Division.

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21 Affected building notices and building product rectification orders

(1) The Council **IS NOT** aware of any affected building notice as defined under the Building Products (Safety) Act 2017 that is in force in respect of the land.

(2)(a) The Council **IS NOT** aware of any building product rectification order as defined under the Building Products (Safety) Act 2017 that is in force in respect of the land and has not been fully complied with, and

(2)(b) The Council **IS NOT** aware of any notice of intention to make a building product rectification order as defined under the Building Products (Safety) Act 2017 given in respect of the land and is outstanding.

Note: Contaminated Land Management Act 1997: The following matters are prescribed by Section 59(2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate:

- (a) The Council **HAS NOT** been informed by the Environment Protection Authority that the land is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.
- (b) The Council **HAS NOT** been informed by the Environment Protection Authority that the land is subject to a management order within the meaning of the Contaminated Land Management Act 1997.
- (c) The Council **HAS NOT** been informed by the Environment Protection Authority that the land is subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.
- (d) The Council **HAS NOT** been informed by the Environment Protection Authority that the land is subject of an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.
- (e) The land **IS NOT** the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 that has been provided to the Council.

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Information under Section 10.7(5)

As at the date of this certificate, the abovementioned land is also affected as follows:

(NOTE: SECTION 10.7(6) STATES THAT A COUNCIL SHALL NOT INCUR ANY LIABILITY IN RESPECT OF ANY ADVICE PROVIDED IN GOOD FAITH PURSUANT TO SECTION 10.7(5))

DCPs, Contribution Plans & Planning Agreements

SHOALHAVEN CONTRIBUTIONS PLAN 2019 - DRAFT AMENDMENT NO 7 - MOSS VALE ROAD SOUTH URBAN RELEASE AREA PROJECT - PUBLIC EXHIBITION 24 MARCH 2021 to 23 APRIL 2021 (64284E) (MIN20.387)

The draft amendment to Shoalhaven Contributions Plan (CP) 2019 supports Planning Proposal PP054 which seeks to amend Shoalhaven LEP 2014 to rezone land at Taylors Lane, Cambewarra, from E2 Environmental Conservation to R1 General Residential to enable residential development. The PP seeks to make corresponding changes to lot size controls, the urban release area (URA) boundary and the riparian lands and watercourses map within the LEP to enable the rezoned land to be included in the Moss Vale Road South URA. The draft amendment to the CP 2019 has been prepared to include the subject land in the catchment area for roads, drainage and public open space projects in Moss Vale Road South URA.

SHOALHAVEN CONTRIBUTIONS PLAN 2019 - DRAFT AMENDMENT NO 8 - OLD SUBDIVISION PROPERTIES (housekeeping) - PUBLIC EXHIBITION 5 MAY 2021 to 4 JUNE 2021 (66770E) (MIN21.180)

The draft amendment to Shoalhaven Contributions Plan (CP) 2019 relates to the list of Old Subdivision Properties located in Schedule 2 of the Plan. The Plan provides a mechanism for the levying of development contributions for land which is the result of a subdivision approved prior to 1993 that has subsequently been rezoned to enable development. These are known as 'old subdivision properties' (OSP's). The purpose of this Amendment is to update Schedule 2 of the Plan to ensure that the correct list of OSP's is provided.

SHOALHAVEN DEVELOPMENT CONTROL PLAN 2014 - DRAFT AMENDMENT NO 44 - CHAPTER N3 BERRY RESIDENTIAL SUBDIVISION - PUBLIC EXHIBITION 28 OCTOBER 2020 to 8 JANUARY 2021 (64037E) (MIN20.619)

Draft Chapter N3 Berry Residential Subdivision supports a proposed amendment to Shoalhaven Local Environmental Plan 2014 (PP029) to rezone land south of Hitchcocks Lane to enable residential development. The draft DCP Chapter N3 contains provisions to guide future subdivision and housing development on the land subject to PP029 and an updated Masterplan for land west of the Princes Highway at Berry.

SHOALHAVEN DEVELOPMENT CONTROL PLAN 2014 - DRAFT AMENDMENT NO 46 - CHAPTER NB3 MOSS VALE ROAD SOUTH URBAN RELEASE AREA - PUBLIC EXHIBITION 24 MARCH 2021 to 23 APRIL 2021 (64283E) (MIN20.387)

The draft DCP amendment supports Planning Proposal PP054 which seeks to amend Shoalhaven LEP 2014 to rezone part of Lot 1 DP 949932, Taylors Lane, Cambewarra, from E2 Environmental Conservation to R1 General Residential to enable residential development. The PP seeks to make corresponding changes to lot size controls, the urban release area (URA) boundary and the riparian lands and watercourses map within the LEP to enable the rezoned land to be included in the Moss Vale Road South URA. The draft DCP amendment includes the subject land in the indicative layout plan, staging plan and other relevant maps/figures of Chapter NB3.

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Matters Affecting This Land

HMAS ALBATROSS MILITARY AIRCRAFT OPERATING AREA

Advice to Council on 3 November 2006 confirms information previously provided by The Department of Defence, that the subject land is within HMAS Albatross Military Aircraft Operating Area. Specific heights can be obtained by contacting HMAS Albatross at Nowra.

NOWRA BOMADERRY STRUCTURE PLAN

This property is located in the area covered by the Nowra Bomaderry Structure Plan (NBSP). The NBSP was adopted by Council in 2006 and endorsed by State Government in 2008. The NBSP is not a legal document but rather one that provides strategic direction and guidance. The NBSP provides the planning framework for growth, development opportunities and conservation measures in the Nowra Bomaderry area for the next 20 years. It identifies potential areas for new living areas and industrial expansion as well as a future western bypass and the preferred road network required to support long-term growth. Landowners and prospective buyers are encouraged to view the Adopted and Endorsed Strategic Direction and Structure Plan Map.

Further information can be found on Council's website [Shoalhaven City Council Planning Register](#) or by contacting Council's Strategic Planning team on (02) 4429 5377.

Matters Affecting The Whole Of The City

ACID SULFATE SOILS - Large areas of the coastal zone of NSW have the potential to be affected by acid sulfate soils which become problematic if exposed during excavations or similar activities. The Dept of Land & Water Conservation have maps which indicate the potential occurrence of acid sulfate soils. Prior to undertaking work which involves substantial soil disturbance, you should ascertain the possibility of acid sulfate soils existing on your property. Enquiries to NSW Department of Planning, Industry and Environment.

INTERIM POLICY - DEVELOPMENT ADJOINING NARROW LANEWAYS

Council resolved on 6 November 2018 to adopt an interim policy position regarding development adjoining narrow laneways. The Interim Policy provides direction regarding access, servicing, design and use of narrow laneways as a primary frontage. Contact Council's - Strategic Planning for further information. (MIN18.891) (57914E)

POLICY - PROVISION OF WATER AND SEWERAGE INFRASTRUCTURE - DEVELOPMENT NOT INCLUDED IN DEVELOPMENT SERVICING PLANS

This Policy shall apply to all lands which have not been included in water supply and/or sewerage services development servicing plans.

POLICY - COMPANION ANIMALS (IMPACTS ON NATIVE FAUNA) - CONDITIONS OF DEVELOPMENT CONSENT

Council resolved on 21 February 2017, in order to protect populations of native fauna, including threatened species, from impacts associated with the keeping of domestic cats and dogs within certain development, that appropriate restrictions on title or conditions of consent for the management of companion animals may be applied in sensitive environmental locations (23139E)(MIN17.95)(MIN17.95)

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INFORMATION REGARDING LOOSE-FILLED ASBESTOS INSULATION

Some residential homes located in NSW have been identified as containing loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, Council recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose-fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building's occupants.

Contact NSW Fair Trading for further information.

INFORMATION REGARDING FOSSICKING DISTRICT 68.

Pursuant to section 369A of the Mining Act 1992, the NSW Department of Planning, Industry and Environment have declared all land within the Shoalhaven City Council Local Government Area to be a Fossicking District (Fossicking District 68). Contact the NSW Department of Planning, Industry and Environment for further information.

for the CHIEF EXECUTIVE OFFICER

PLANNING CERTIFICATE UNDER SECTION 10.7
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Certificate No: 2021/02260

Applicant: Colee Colette Quayle
4/39 McKenzie Avenue
Wollongong, NSW, 2500

Receipt No.: Ext: 122130
Date: 10/05/2021
Fee: \$133
Urgency Fee: \$0.00

Applicant reference: 12548413

The land to which this Certificate relates is:
Lot 16 DP 1121337, Railway St, BOMADERRY
Parish of BUNBERRA, County of CAMDEN

The above information is as recorded by Council.

DISCLAIMER AND CAUTION:

1. The information on zones, controls etc given below relates to the land for which the certificate was sought. If enquirers wish to know what zones, other controls, etc apply or are proposed on nearby land then they should make enquiries in person at Council's offices.
2. The information contained in this certificate is accurate as at the date of this certificate.
3. In providing this certificate Council has in good faith relied upon information provided to it or sourced from third parties. Where Council has obtained the information from third parties, either exclusively or in conjunction with information held by Council, the Certificate details the source of that third party information. Council cautions persons against relying upon information in the Certificate sourced from third parties as to its accuracy, applicability to specific lands and its currency without verification from the specified third party and, where appropriate, professional advice and the adoption of prudent land acquisition measures and appropriate professional advice. To the full extent permitted by law Council disclaims liability with respect to any information in this Certificate sourced from third parties.

The information contained in this certificate is prepared in accordance with the Environmental Planning and Assessment Act 1979 (as amended) and the Environmental Planning Assessment Regulation 2000 (as amended).

PLANNING CERTIFICATE UNDER SECTION 10.7
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This is a Planning Certificate issued by Shoalhaven City Council under Section 10.7(2) of the Environmental Planning and Assessment Act 1979 on the application of the person described above in respect of the land described above.

1 Names of relevant planning instruments and DCPs

- (1) The name of each environmental planning instrument that applies to the carrying out of development on the land:

Shoalhaven Local Environmental Plan 2014 (as amended)

State Environmental Planning Policies

Coastal Management 2018. Gazetted 3 April 2018

The policy applies to land within the "coastal zone" and identifies land within the coastal zone as one of four coastal management areas being the coastal wetlands and littoral rainforests area, the coastal vulnerability area, the coastal environment area, and the coastal use area. The policy also sets out matters to be considered when undertaking development in each of the coastal management areas.

Vegetation in Non-Rural Areas. Gazetted 25 August 2017 (& as amended)

Is to protect the biodiversity values of trees and other vegetation in non-rural areas of the State and to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation.

State Environmental Planning Policies affecting the City

State Environmental Planning Policy No. 21 – Caravan Parks

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

State Environmental Planning Policy No. 36 – Manufactured Home Estates

State Environmental Planning Policy No. 50 – Canal Estate Development

State Environmental Planning Policy No. 55 – Remediation of Land

State Environmental Planning Policy No. 64 - Advertising and Signage

State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development

State Environmental Planning Policy No. 70 - Affordable Housing (Revised Schemes)

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004

State Environmental Planning Policy (Building Sustainability Index: Basix) 2004

State Environmental Planning Policy (State Significant Precincts) 2005

State Environmental Planning Policy (Infrastructure) 2007

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

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State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Affordable Rental Housing) 2009
State Environmental Planning Policy (State and Regional Development) 2011
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017
State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017
State Environmental Planning Policy (Coastal Management) 2018
State Environmental Planning Policy (Primary Production and Rural Development) 2019
State Environmental Planning Policy (Koala Habitat Protection) 2020
State Environmental Planning Policy (Koala Habitat Protection) 2021

- (2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (not including any proposed instrument where the Secretary has notified the Council that the making of the proposed instrument has been deferred indefinitely or has not been approved) is:

Draft State Environmental Planning Policies

Draft State Environmental Planning Policy (Environment) 2017

Draft State Environmental Planning Policy (Remediation of Land)

Explanation of Intended Effect - State Environmental Planning Policies

Explanation of Intended Effect - Proposed Housekeeping Amendment to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

Explanation of Intended Effect - Proposed Activation Precincts SEPP

Explanation of Intended Effect - Amendment to Infrastructure SEPP

Explanation of Intended Effect - Housing Diversity State Environmental Planning Policy

Explanation of Intended Effect - Design and Place SEPP

Explanation of Intended Effect - Agritourism and small-scale agriculture development. Includes proposed amendments to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

Explanation of Intended Effect - Building Business Back Better (proposed changes to State Environmental Planning Policy (Exempt and Complying Development Codes) 2008).

Explanation of Intended Effect - Review of clause 4.6 of the Standard Instrument LEP

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Draft Local Environmental Plans and planning proposals for Local Environmental Plans

PLANNING PROPOSAL - PP026 TO AMEND SHOALHAVEN LOCAL ENVIRONMENTAL PLAN 2014 COASTAL HAZARDS REVIEW - PUBLIC EXHIBITION 6 FEBRUARY 2019 TO 8 MARCH 2019 (55961E) (MIN18.609)

This Planning Proposal (PP) seeks to remove the Coastal Risk Planning Map from Shoalhaven LEP 2014 and rely on Council's Coastal Hazard Interactive Mapping to identify areas at risk of coastal hazards. The PP will also amend Clause 7.4 Coastal risk planning to apply to all land at risk of coastal hazards instead of land identified in the Coastal Risk Planning Map, to allow for better identification and management of areas at risk of coastal hazards.

PLANNING PROPOSAL - PP029 TO AMEND SHOALHAVEN LOCAL ENVIRONMENTAL PLAN 2014 - HITCHCOCKS LANE BERRY RESIDENTIAL INVESTIGATION AREA - PUBLIC EXHIBITION 28 OCTOBER 2020 TO 8 JANUARY 2021 (56367E) (MIN20.619)

This Planning Proposal (PP) seeks to amend the land use zone, minimum lot size for subdivision and height of buildings provisions within Shoalhaven Local Environmental Plan 2014 to enable low density residential development on certain land located south of Hitchcocks Lane in Berry.

PLANNING PROPOSAL - PP035 TO AMEND SHOALHAVEN LOCAL ENVIRONMENTAL PLAN 2014 - 48 JERVIS BAY ROAD FALLS CREEK - COMMUNITY TITLE SUBDIVISION - PUBLIC EXHIBITION 6 JANUARY 2021 TO 5 FEBRUARY 2021 (57076E) (MIN20.253)

This Planning Proposal (PP) seeks to amend the land use zones, minimum lot size for subdivision and terrestrial biodiversity provisions as well as introduce a site-specific legal mechanism within Shoalhaven Local Environmental Plan 2014 to enable a community title subdivision (consisting of 13 housing lots and one neighbourhood environmental conservation lot) on the subject land.

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PLANNING PROPOSAL - PP040 TO AMEND SHOALHAVEN LOCAL ENVIRONMENTAL PLAN 2014 - 2018 HOUSEKEEPING AMENDMENT - MAPPING - PUBLIC EXHIBITION 5 MAY 2021 TO 4 JUNE 2021 (58912E) (MIN20.714)

PP040 intends to amend a number of maps within Shoalhaven LEP 2014 to: Correct identified anomalies or inconsistencies in the LEP mapping; Correct administrative errors (e.g. items incorrectly or incompletely identified in mapping); Respond to the registration of new land titles, landowner requests, development assessment processes. The PP also proposes the removal of the mapping associated with clause 5.9 Preservation of Trees or Vegetation as the related clause was repealed from the NSW Standard Instrument LEP and Shoalhaven LEP 2014 in 2017. There are thirty-seven (37) items covering a variety of minor mapping issues relating to minimum lot size, zoning, height, terrestrial biodiversity, bushfire, buffer zones, natural resource sensitivity and land reservation acquisition. The proposed changes will help to improve the overall operation of the plan.

PLANNING PROPOSAL - PP054 TO AMEND SHOALHAVEN LOCAL ENVIRONMENTAL PLAN 2014 - REZONING OF RIPARIAN LAND AT TAYLORS LANE CAMBEWARRA - PUBLIC EXHIBITION 24 MARCH 2021 TO 23 APRIL 2021 (60737E) (MIN20.387)

The Planning Proposal seeks to amend Shoalhaven Local Environmental Plan (LEP) 2014 to rezone part of Lot 1 DP 949932 from E2 Environmental Conservation to R1 General Residential to enable residential development. The PP also seeks to make corresponding changes to lot size controls, the riparian lands and watercourses map and the urban release area (URA) boundary within the LEP to enable the rezoned land to be included within the Moss Vale Road South URA. The subject land is currently identified as a watercourse and riparian corridor. An independent assessment of the identified watercourse and riparian area was undertaken and supports the changes sought by the PP.

- (3) The name of each development control plan that applies to the carrying out of development on the land is:

Shoalhaven Development Control Plan 2014 (as amended)

(Note: a copy of Shoalhaven Development Control Plan 2014 is available on the internet at www.dcp2014.shoalhaven.nsw.gov.au or can be inspected at Council's Nowra office during normal business hours.)

2 Zoning and land use under relevant LEPs

For Shoalhaven Local Environmental Plan 2014 (as amended)

- a. **The identity of the zone in which the land is included under Shoalhaven Local Environmental Plan 2014:**

Zone IN1 General Industrial

- b. **The purposes for which Shoalhaven Local Environmental Plan 2014 provides that development may be carried out within the zone without the need for development consent:**

Nil

- c. **The purposes for which Shoalhaven Local Environmental Plan 2014 provides that development may not be carried out within the zone except with development consent:**

Specialised retail premises; Depots; Freight transport facilities; Garden Centres; General industries; Hardware and Building Supplies; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Markets; Neighbourhood shops; Oyster aquaculture; Places of Public Worship; Roads; Take away food and drink premises; Tank-based aquaculture; Timber yards; Warehouse or distribution centres; Any other development not specified in item b or d.

- d. **The purposes for which Shoalhaven Local Environmental Plan 2014 provides that development is prohibited within the zone:**

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Centre-based child care facilities; Correctional centres; Crematoria; Eco-tourist facilities; Educational establishments; Environmental facilities; Exhibition villages; Extractive industries; Farm buildings; Forestry; Function centres; Health services facilities; Highway service centres; Home-based childcare; Home businesses; Home occupations; Home occupations (sex services); Information and education facilities; Marinas; Mooring pens; Moorings; Office premises; Open cut mining; Pond-based aquaculture; Registered clubs; Residential accommodation; Respite day care centres; Restricted premises; Retail premises; Sex services premises; Tourist and visitor accommodation; Water recreation structures; Wharf or boating facilities.

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- e. Development standards applying to the land under Shoalhaven Local Environmental Plan 2014 **DO NOT** fix minimum land dimensions for the erection of a dwelling-house on the land.

- f. The land **DOES NOT** include or comprise critical habitat under Shoalhaven Local Environmental Plan 2014.
(Note: Shoalhaven Local Environmental Plan 2014 does not identify areas of "critical habitat" as defined in Part 7A of the Fisheries Management Act 1994 (subject to section 5AA of the Environmental Planning and Assessment Act 1979). Enquiries about whether the land is "critical habitat" Part 7A of the Fisheries Management Act 1994 should be directed to the NSW Office of Environment and Heritage).

- g. The land **IS NOT** in a conservation area (however described) under Shoalhaven Local Environmental Plan 2014.
(Note: this item relates to "heritage conservation areas" as defined in the LEP).

- h. An item of environmental heritage (however described) under Shoalhaven Local Environmental Plan 2014 **IS NOT** situated on the land.
(Note: "environmental heritage" relates to matters/items of cultural heritage, for example, items listed on the State Register, items specifically listed in the LEP or matters subject to an "interim heritage order" under the Heritage Act 1977).

Other provisions under Shoalhaven Local Environmental Plan 2014 may also apply to the development of this land. You can view the Shoalhaven Local Environmental Plan 2014 at the website www.legislation.nsw.gov.au or at Council's offices.

2A Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

- (a) The land **IS NOT** within any zone (however described) under Part 3 of the State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (the 2006 SEPP), or
- (b) The land **IS NOT** within any Precinct Plan (within the meaning of the 2006 SEPP), or
- (c) The land **IS NOT** within a proposed Precinct Plan that is or has been the subject of community consultation or on public exhibition under the Act.

3 Complying development

Qualifying Statement on Council Data Affecting this Item

Shoalhaven City Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, however specific land restrictions may not apply to all of the land. The information included in this Planning Certificate is provided in accordance with the Environmental Planning & Assessment Regulation 2000 (as amended). It is strongly suggested that you review the State Environmental Planning Policy (Exempt and Complying Developments Codes) 2008 and supporting information before proceeding with the lodgement of a Complying Development Certificate application to either Council or a private certifier. The NSW Department of Planning and Environment has provided a series of information sheets on its website

<http://www.planning.nsw.gov.au/exemptandcomplying>

Note: There are other provisions in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 that must be complied with in order for development on the land to be complying development.

Specific land exemptions for Housing Code, Rural Housing and Greenfield Housing Code

The extent to which the land is land on which complying development may be carried out under the codes of State Environmental Planning Policy (Exempt Complying Development Codes) 2008 **IS RESTRICTED** by the following provisions of clauses 1.17A (1)(c) to (e), (2), (3) and (4), 1.18(1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 but the restriction may not apply to all of the land and Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Under the Housing Code and the Rural Housing Code the land is affected by specific land exemptions -

Clause 1.19(1)(c) & Clause 1.19(5)(c) because the land is identified on an Acid Sulfate Soils Map as being Class 1 or Class 2.

Clause 1.19(1)(e)(i) & Clause 1.19(5)(f)(i) because the land is identified by an environmental planning instrument as being: within a buffer area.

Specific land exemptions for Housing Alterations Code and General Development Code

The extent to which the land is land on which complying development may be carried out under the codes of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 **IS NOT RESTRICTED** by the following provisions of clauses 1.17A (1)(c) to (e), (2), (3) and (4), 1.18(1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 but the restriction may not apply to all of the land, and Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

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Specific land exemptions for Commercial and Industrial (New Buildings and Additions) Code

The extent to which the land is land on which complying development may be carried out under the codes of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 **IS RESTRICTED** by the following provisions of clauses 1.17A (1)(c) to (e), (2), (3) and (4), 1.18(1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 but the restriction may not apply to all of the land and Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Under the General Commercial and Industrial Code the land is affected by specific land exemptions -

Clause 1.19(1)(c) & Clause 1.19(5)(c) because the land is identified on an Acid Sulfate Soils Map as being Class 1 or Class 2.

Clause 1.19(1)(e)(i) & Clause 1.19(5)(f)(i) because the land is identified by an environmental planning instrument as being: within a buffer area.

Specific land exemptions for Low Rise Housing Diversity Code

The extent to which the land is land on which complying development may be carried out under the codes of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 **IS RESTRICTED** by the following provisions of clauses 1.17A (1)(c) to (e), (2), (3) and (4), 1.18(1) (c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 but the restriction may not apply to all of the land and Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Under the Low Rise Housing Diversity Code the land is affected by specific land exemptions -

Clause 1.19(1)(c) & Clause 1.19(5)(c) because the land is identified on an Acid Sulfate Soils Map as being Class 1 or Class 2.

Clause 1.19(1)(e)(i) & Clause 1.19(5)(f)(i) because the land is identified by an environmental planning instrument as being: within a buffer area.

4B Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works

The owner (or any previous owner) of the land **HAS NOT** consented in writing to the land being subject to annual charges under section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

5 Mine subsidence

The land **HAS NOT** been proclaimed to be a mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act 1961.

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6 Road widening and road alignment

- (a) The land **IS NOT** affected by any road widening or road realignment under Division 2 of Part 3 of the Roads Act 1993
- (b) If the land is affected by any road widening or road realignment under any environmental planning instrument it will be listed below.
- (c) The land **IS NOT** affected by any road widening or road realignment under any resolution of Council.

Note: Information in item 6, relates to Council's road proposals; other authorities e.g. NSW Roads and Maritime Services, may have proposals not set out herein.

7 Council and other public authority policies on hazard risk restrictions

- (a) The land **IS** affected by the following policy or policies adopted by the Council that restrict the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulfate soils or any other risk (other than flooding).

Shoalhaven Development Control Plan 2014

Contaminated Land Policy 2013

Shoalhaven Coastal Zone Management Plan 2018

HAZARD RISK RESTRICTION

This property is identified as "sensitive area" on Shoalhaven LEP 2014 - Natural Resources Sensitivity land map and is affected by Clause 7.7 Landslide risk and other land degradation. Clause 7.7 applies to land comprising steep slopes and susceptible to other forms of land degradation.

- (b) The land **IS NOT** affected by a policy adopted by a public authority (other than the Council) and notified to the Council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the Council, that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulfate soils or any other risk (other than flooding).

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7A Flood related development controls information

(1) Whether or not development on that land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related development controls.

(2) Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

(3) Words and expressions in this clause have the same meanings as in the Standard Instrument.

(1) Development on the land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) **IS** subject to flood related development controls as contained in Clause 7.3 of Shoalhaven Local Environmental Plan 2014; and/or Chapter G9 of Shoalhaven Development Control Plan 2014.

(2) Development on the land or part of the land for any other purpose **IS** subject to flood related development controls as contained in Clause 7.2A and Clause 7.3 of Shoalhaven Local Environmental Plan 2014; and/or Chapter G9, G10 of Shoalhaven Development Control Plan 2014.

For further information or to request a flood certificate, please contact Council's - City Development.

8 Land reserved for acquisition

The land **IS NOT** reserved for acquisition by a public authority, as referred to in section 3.15 of the Act under any environmental planning instrument, or proposed environmental planning instrument referred to in clause 1.

9 Contributions plans

The name of the contributions plan applying to the land is:

Shoalhaven Contributions Plan 2019 (as amended)

9a Biodiversity certified land

The land **IS NOT** biodiversity certified land under Part 8 of the Biodiversity Conservation Act 2016.

Note: Biodiversity certified land includes land certified under Part 7AA of the Threatened Species Conservation Act 1995 that is taken to be certified under Part 8 of the Biodiversity Conservation Act 2016.

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- 10 **Biobanking stewardship sites**
The council **HAS NOT** been notified by the Chief Executive of the Office of Environment and Heritage whether or not the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the Biodiversity Conservation Act 2016.
Note: Biodiversity stewardship agreements include biobanking agreements under Part 7A of the Threatened Species Conservation Act 1995 that are taken to be biodiversity stewardship agreements under Part 5 of the Biodiversity Conservation Act 2016.
- 10a **Native vegetation clearing set asides**
The land **DOES NOT** contain a set aside area under section 60ZC of the Local Land Services Act 2013.
- 11 **Bush fire prone land**
The land **IS NOT** bushfire prone (as defined in the Environmental Planning and Assessment Act 1979).
- 12 **Property vegetation plans**
The Council **HAS NOT** been notified that the land is land to which a property vegetation plan approved under Part 4 of the Native Vegetation Act 2003 (and that continues in force) applies.
- 13 **Orders under Trees (Disputes Between Neighbours) Act 2006**
The Council **HAS NOT** been notified that an order has been made under the Trees (Disputes Between Neighbours) Act 2006 to carry out work in relation to a tree on the land.
- 14 **Directions under Part 3A**
There is no direction by the Minister in force under section 75P (2) (c1) of the 'Environmental Planning and Assessment Act 1979' that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect.
- 15 **Site compatibility certificates and conditions for seniors housing**
The Council **IS NOT** aware of any current site compatibility certificate (seniors housing) in respect of proposed development on the land.
- 16 **Site compatibility certificates for infrastructure, schools or TAFE establishments**
The Council **IS NOT** aware of a current site compatibility certificate (Infrastructure) or site compatibility certificate (schools or TAFE establishments), in respect of proposed development on the land.
- 17 **Site compatibility certificates and conditions for affordable rental housing**
The Council **IS NOT** aware of a current site compatibility certificate (affordable rental housing), in respect of proposed development on the land.
- 18 **Paper subdivision information**
The land **IS NOT** affected by a development plan (proposed or adopted) or subdivision order as defined under Part 16C of the Environmental Planning & Assessment Regulation 2000

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19 Site verification certificates

The Council **IS NOT** aware of a current site verification certificate (mining, petroleum production and extractive industries), in respect of this land.

20 Loose-filled asbestos insulation

The land **DOES NOT** include any residential premises (within the meaning of Division 1A of Part 8 of the Home Building Act 1989) that are listed on the register that is required to be maintained under that Division.

21 Affected building notices and building product rectification orders

(1) The Council **IS NOT** aware of any affected building notice as defined under the Building Products (Safety) Act 2017 that is in force in respect of the land.

(2)(a) The Council **IS NOT** aware of any building product rectification order as defined under the Building Products (Safety) Act 2017 that is in force in respect of the land and has not been fully complied with, and

(2)(b) The Council **IS NOT** aware of any notice of intention to make a building product rectification order as defined under the Building Products (Safety) Act 2017 given in respect of the land and is outstanding.

Note: Contaminated Land Management Act 1997: The following matters are prescribed by Section 59(2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate:

- (a) The Council **HAS NOT** been informed by the Environment Protection Authority that the land is significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.
- (b) The Council **HAS NOT** been informed by the Environment Protection Authority that the land is subject to a management order within the meaning of the Contaminated Land Management Act 1997.
- (c) The Council **HAS NOT** been informed by the Environment Protection Authority that the land is subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.
- (d) The Council **HAS NOT** been informed by the Environment Protection Authority that the land is subject of an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.
- (e) The land **IS NOT** the subject of a site audit statement within the meaning of the Contaminated Land Management Act 1997 that has been provided to the Council.

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Information under Section 10.7(5)

As at the date of this certificate, the abovementioned land is also affected as follows:

(NOTE: SECTION 10.7(6) STATES THAT A COUNCIL SHALL NOT INCUR ANY LIABILITY IN RESPECT OF ANY ADVICE PROVIDED IN GOOD FAITH PURSUANT TO SECTION 10.7(5))

DCPs, Contribution Plans & Planning Agreements

SHOALHAVEN CONTRIBUTIONS PLAN 2019 - DRAFT AMENDMENT NO 7 - MOSS VALE ROAD SOUTH URBAN RELEASE AREA PROJECT - PUBLIC EXHIBITION 24 MARCH 2021 to 23 APRIL 2021 (64284E) (MIN20.387)

The draft amendment to Shoalhaven Contributions Plan (CP) 2019 supports Planning Proposal PP054 which seeks to amend Shoalhaven LEP 2014 to rezone land at Taylors Lane, Cambewarra, from E2 Environmental Conservation to R1 General Residential to enable residential development. The PP seeks to make corresponding changes to lot size controls, the urban release area (URA) boundary and the riparian lands and watercourses map within the LEP to enable the rezoned land to be included in the Moss Vale Road South URA. The draft amendment to the CP 2019 has been prepared to include the subject land in the catchment area for roads, drainage and public open space projects in Moss Vale Road South URA.

SHOALHAVEN CONTRIBUTIONS PLAN 2019 - DRAFT AMENDMENT NO 8 - OLD SUBDIVISION PROPERTIES (housekeeping) - PUBLIC EXHIBITION 5 MAY 2021 to 4 JUNE 2021 (66770E) (MIN21.180)

The draft amendment to Shoalhaven Contributions Plan (CP) 2019 relates to the list of Old Subdivision Properties located in Schedule 2 of the Plan. The Plan provides a mechanism for the levying of development contributions for land which is the result of a subdivision approved prior to 1993 that has subsequently been rezoned to enable development. These are known as 'old subdivision properties' (OSP's). The purpose of this Amendment is to update Schedule 2 of the Plan to ensure that the correct list of OSP's is provided.

SHOALHAVEN DEVELOPMENT CONTROL PLAN 2014 - DRAFT AMENDMENT NO 44 - CHAPTER N3 BERRY RESIDENTIAL SUBDIVISION - PUBLIC EXHIBITION 28 OCTOBER 2020 to 8 JANUARY 2021 (64037E) (MIN20.619)

Draft Chapter N3 Berry Residential Subdivision supports a proposed amendment to Shoalhaven Local Environmental Plan 2014 (PP029) to rezone land south of Hitchcocks Lane to enable residential development. The draft DCP Chapter N3 contains provisions to guide future subdivision and housing development on the land subject to PP029 and an updated Masterplan for land west of the Princes Highway at Berry.

SHOALHAVEN DEVELOPMENT CONTROL PLAN 2014 - DRAFT AMENDMENT NO 46 - CHAPTER NB3 MOSS VALE ROAD SOUTH URBAN RELEASE AREA - PUBLIC EXHIBITION 24 MARCH 2021 to 23 APRIL 2021 (64283E) (MIN20.387)

The draft DCP amendment supports Planning Proposal PP054 which seeks to amend Shoalhaven LEP 2014 to rezone part of Lot 1 DP 949932, Taylors Lane, Cambewarra, from E2 Environmental Conservation to R1 General Residential to enable residential development. The PP seeks to make corresponding changes to lot size controls, the urban release area (URA) boundary and the riparian lands and watercourses map within the LEP to enable the rezoned land to be included in the Moss Vale Road South URA. The draft DCP amendment includes the subject land in the indicative layout plan, staging plan and other relevant maps/figures of Chapter NB3.

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Matters Affecting This Land

HMAS ALBATROSS MILITARY AIRCRAFT OPERATING AREA

Advice to Council on 3 November 2006 confirms information previously provided by The Department of Defence, that the subject land is within HMAS Albatross Military Aircraft Operating Area. Specific heights can be obtained by contacting HMAS Albatross at Nowra.

NOWRA BOMADERRY STRUCTURE PLAN

This property is located in the area covered by the Nowra Bomaderry Structure Plan (NBSP). The NBSP was adopted by Council in 2006 and endorsed by State Government in 2008. The NBSP is not a legal document but rather one that provides strategic direction and guidance. The NBSP provides the planning framework for growth, development opportunities and conservation measures in the Nowra Bomaderry area for the next 20 years. It identifies potential areas for new living areas and industrial expansion as well as a future western bypass and the preferred road network required to support long-term growth. Landowners and prospective buyers are encouraged to view the Adopted and Endorsed Strategic Direction and Structure Plan Map.

Further information can be found on Council's website [Shoalhaven City Council Planning Register](#) or by contacting Council's Strategic Planning team on (02) 4429 5377.

RAILWAY STREET/BOLONG ROAD

Council's records indicate that this land has been filled or partially filled. Certification will be required from a practising structural engineer prior to undertaking any future building work on the site. Confirmed by Council Resolution on 22/4/1986 (File 80/2754).

Matters Affecting The Whole Of The City

ACID SULFATE SOILS - Large areas of the coastal zone of NSW have the potential to be affected by acid sulfate soils which become problematic if exposed during excavations or similar activities. The Dept of Land & Water Conservation have maps which indicate the potential occurrence of acid sulfate soils. Prior to undertaking work which involves substantial soil disturbance, you should ascertain the possibility of acid sulfate soils existing on your property. Enquiries to NSW Department of Planning, Industry and Environment.

INTERIM POLICY - DEVELOPMENT ADJOINING NARROW LANEWAYS

Council resolved on 6 November 2018 to adopt an interim policy position regarding development adjoining narrow laneways. The Interim Policy provides direction regarding access, servicing, design and use of narrow laneways as a primary frontage. Contact Council's - Strategic Planning for further information. (MIN18.891) (57914E)

POLICY - PROVISION OF WATER AND SEWERAGE INFRASTRUCTURE - DEVELOPMENT NOT INCLUDED IN DEVELOPMENT SERVICING PLANS

This Policy shall apply to all lands which have not been included in water supply and/or sewerage services development servicing plans.

POLICY - COMPANION ANIMALS (IMPACTS ON NATIVE FAUNA) - CONDITIONS OF DEVELOPMENT CONSENT

Council resolved on 21 February 2017, in order to protect populations of native fauna, including threatened species, from impacts associated with the keeping of domestic cats and dogs within certain development, that appropriate restrictions on title or conditions of consent for the management of companion animals may be applied in sensitive environmental locations (23139E)(MIN17.95)(MIN17.95)

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INFORMATION REGARDING LOOSE-FILLED ASBESTOS INSULATION

Some residential homes located in NSW have been identified as containing loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, Council recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose-fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building's occupants.

Contact NSW Fair Trading for further information.

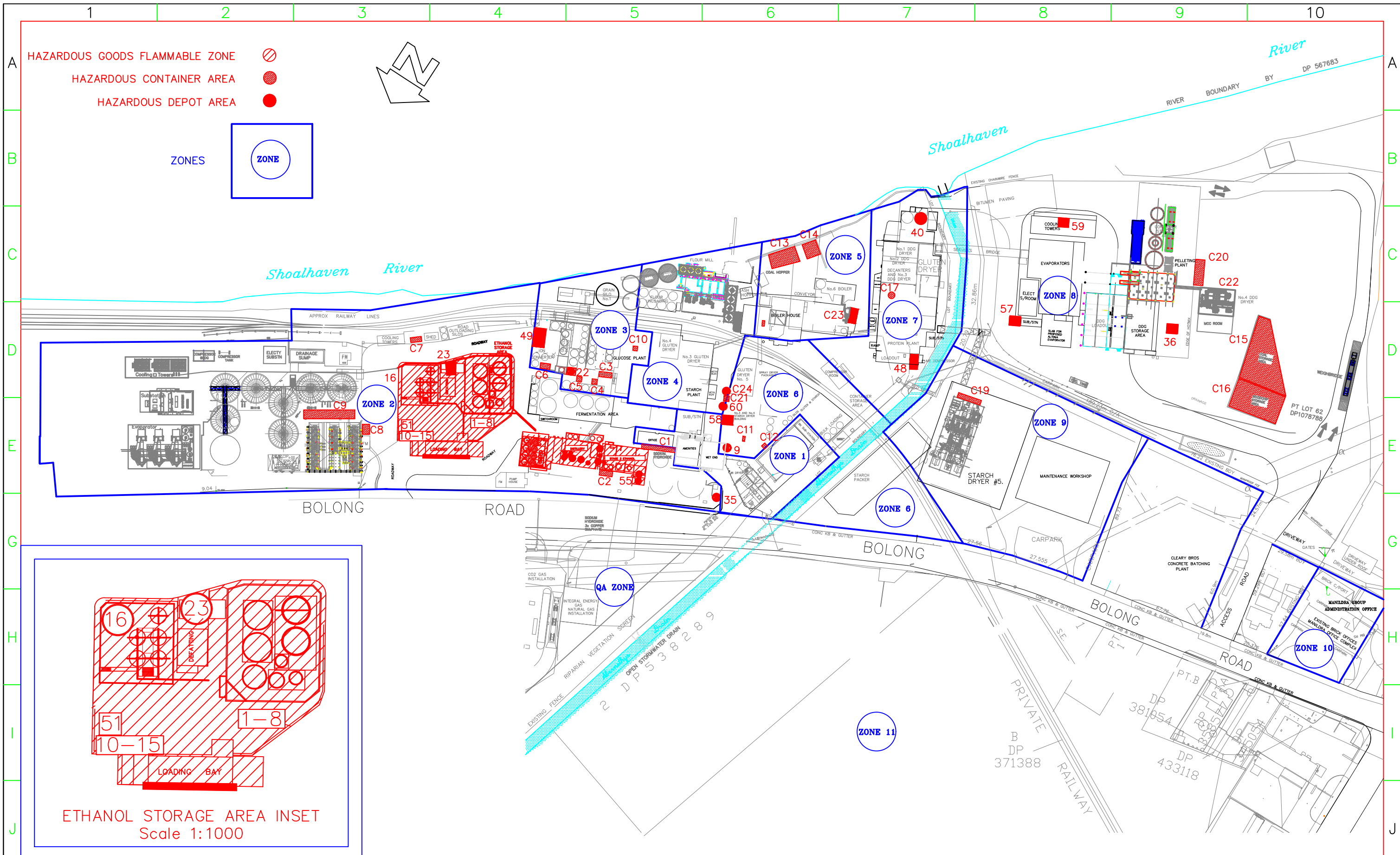
INFORMATION REGARDING FOSSICKING DISTRICT 68.

Pursuant to section 369A of the Mining Act 1992, the NSW Department of Planning, Industry and Environment have declared all land within the Shoalhaven City Council Local Government Area to be a Fossicking District (Fossicking District 68). Contact the NSW Department of Planning, Industry and Environment for further information.

for the CHIEF EXECUTIVE OFFICER

Appendix G

Chemical storage inventory



L	24-09-19	All	C24 was 61, C23 was 19, DDC #4 added & C22.	P.C.	J.S.
K	15-02-19	E6	9 was 8.	P.C.	Rowan
J	15-02-19	H1	16 was 62, 58 relocated.	P.C.	J.S.
I	14-02-19	H1	62 added to ethanol storage area.	P.C.	Rowan
H	09-11-18	All	C18 & emergency 150 tank storage removed.	P.C.	J.S.
G	10-04-18	All	Latest plant additions added.	P.C.	J.S.
F	30-12-16	C5	Starch dryer 5 added.	P.C.	J.S.
E	30-06-16	D2	Depot 1B & ethanol evaporator removed.	P.C.	J.S.
ISS	DATE	ZONE	CHANGE AMENDMENTS	BY	CKD

Commitment to Excellence



GEM OF THE WEST

MANILDRA GROUP

100% AUSTRALIAN

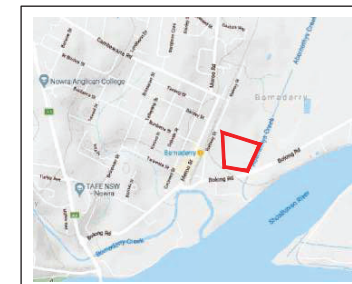


PC Drafting
0439 436508
14-000

DRAWN	PC	DATE	10/12/12	JOB TITLE	SHOALHAVEN STARCHES.	SHT SIZE	A3
CHKD	JS	DATE		DWG TITLE	OVERALL SITE PLAN. DANGEROUS GOODS AREAS.	REV.	L
APPD		DATE		PROJECT No.	4978	DWG No.	MN00-001
		SCALE	1 : 2000				

Appendix H

Slope stability models from SMEC 2020 report (SMEC, 2020) and GHD 2021 report (GHD, 2021)



Site Locality

LEGEND

- ◆ CPT Location
- Borehole Location

Design Contours

- 0.1 m Contours
- 0.5 m Contours

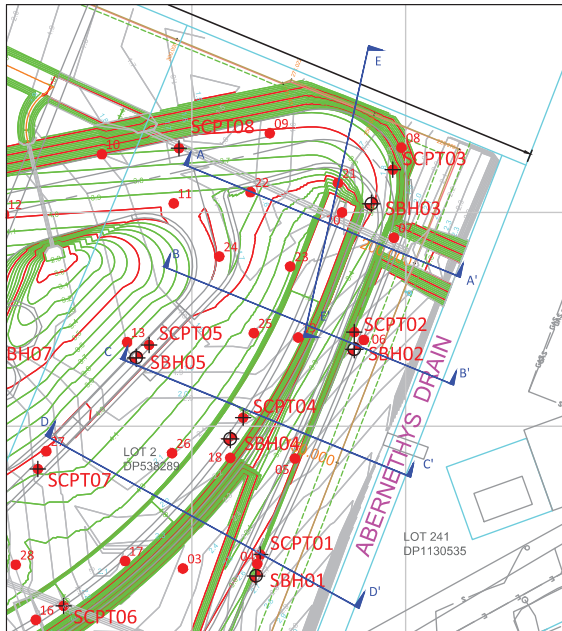
Existing Contours

- 0.1 m Contours

Based drawing from Allen Price & Scarratts Pty
Ltd (Drawing No. 25003-300_600, updated on 18
May 2020)

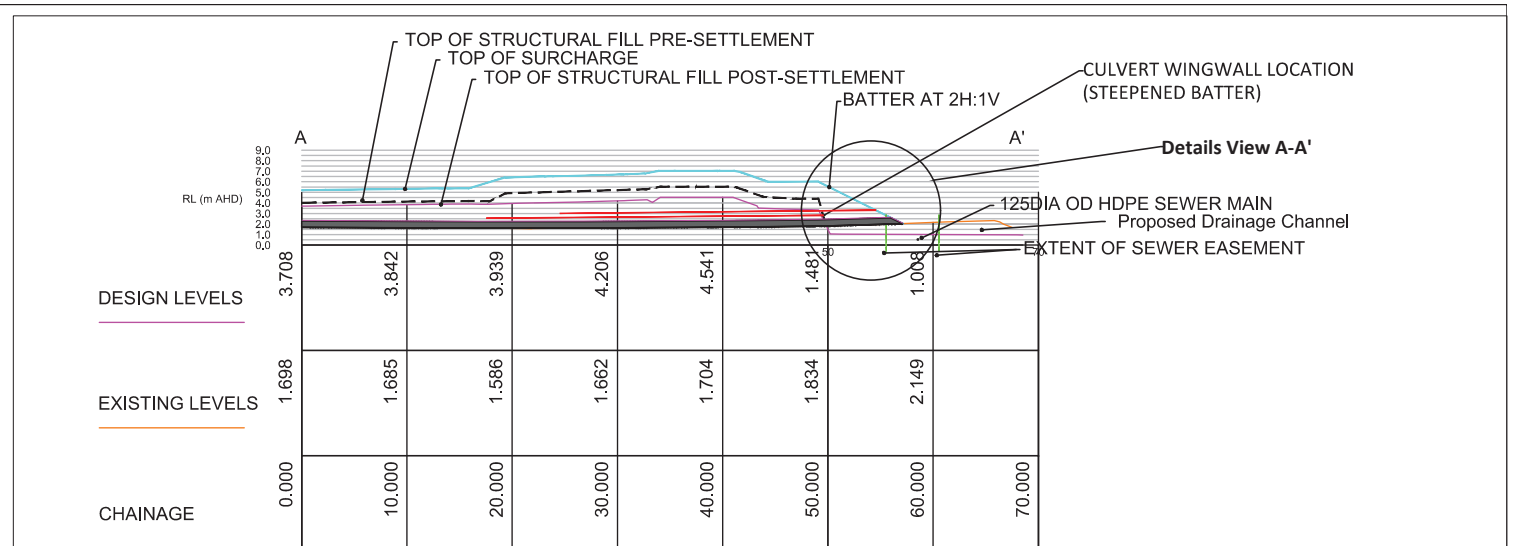
Title :	GEOTECHNICAL SITE INVESTIGATION PLAN	CLIENT: Manilda Group Pty Ltd	DATE: 3/06/2020	DRAWN BY: GRR	REVIEWED BY: KK	PROJECT No: 3001550
Project :	Shoalhaven Starch Plant	 1:1250 @ A3				DRAWING No: 001
Site Location	Shoalhaven Starches, Bolong Road, Bomaderry					REVISION: 02



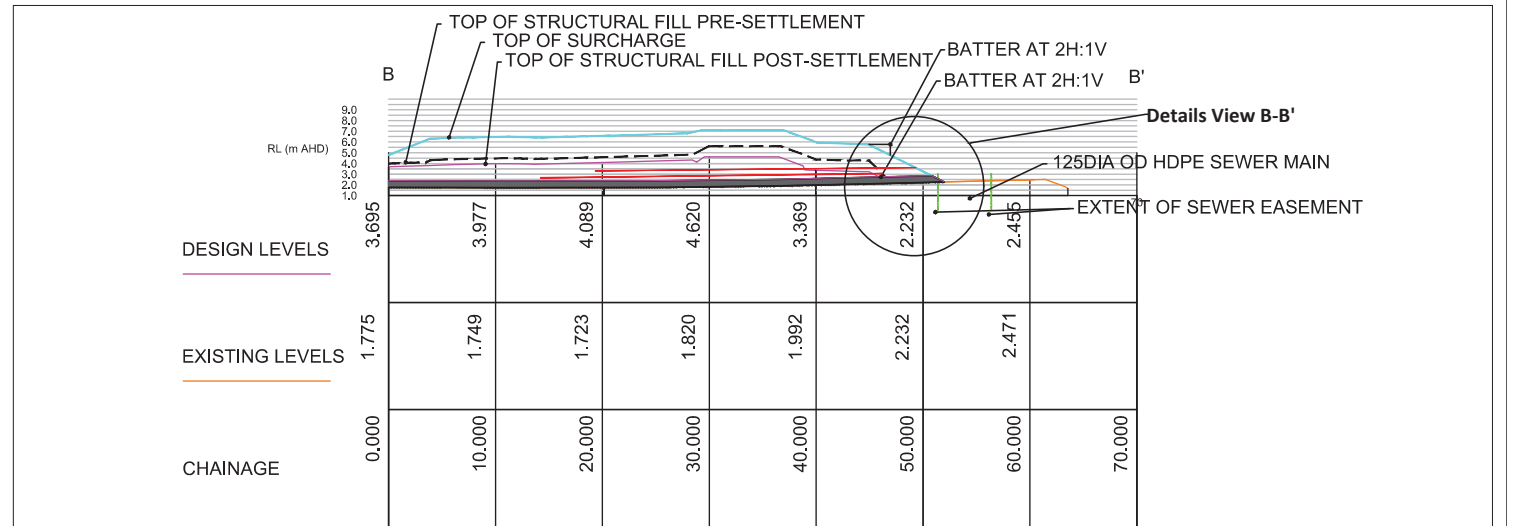


SECTION ARRANGEMENT
SCALE 1:1250

LEGEND	
	CPT Location
	Borehole Location
	Design Points
Design Contours	
	0.1 m Contours
	0.5 m Contours
Existing Contours	
	0.1 m Contours
	Earthwork / Geotechnical Section



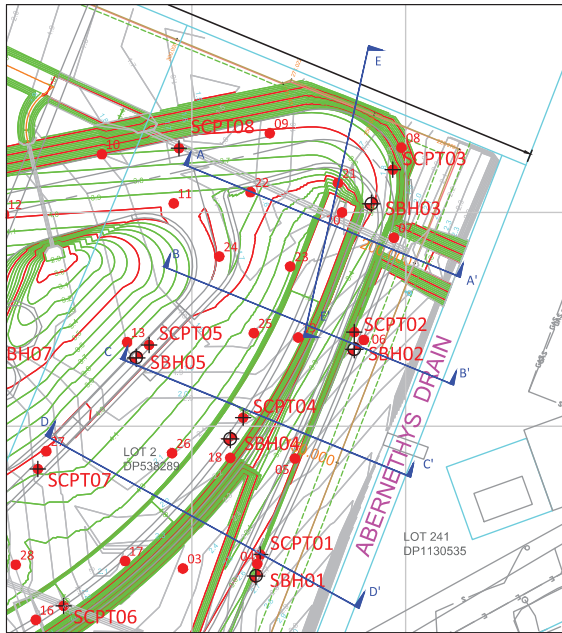
SECTION A-A'
SCALE 1:500



SECTION B-B'
SCALE 1:500



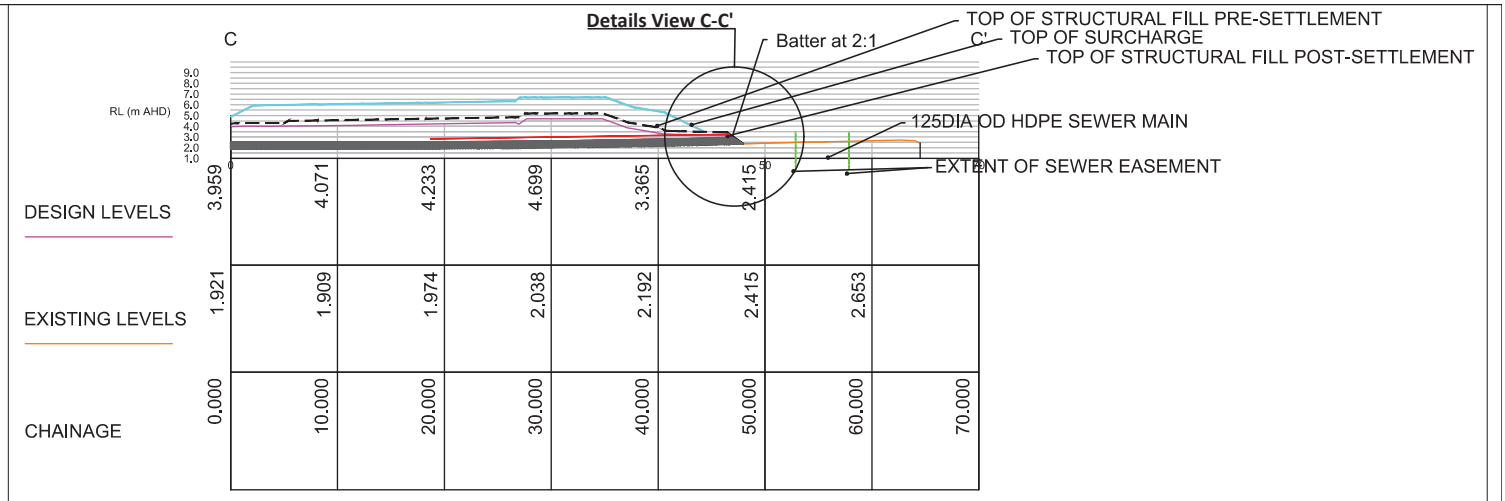
Title :	SECTIONS A-A' & B-B'	CLIENT: Manildra Group Pty Ltd	DATE: 3/06/2020	DRAWN BY: GRR	REVIEWED BY: KK	PROJECT No: 3001550	 SMEC SMEC AUSTRALIA PTY LTD ABN 47 065 475 149 4/20 Beach St WOLLONGONG NSW 2500
Project :	Shoalhaven Starch Plant					DRAWING No: 006.1	
Site Location	Shoalhaven Starches, Bolong Road, Bomaderry					REVISION: -	



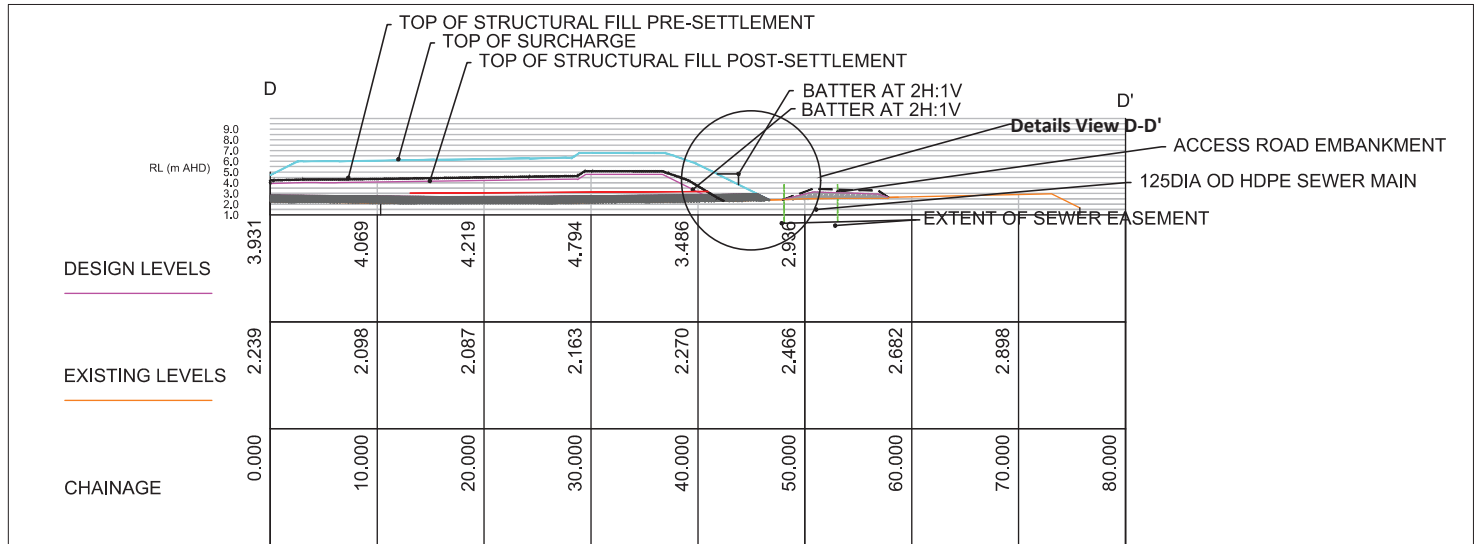
**SECTION ARRANGEMENT
SCALE 1:1250**

LEGEND

- ★ CPT Location
- ⊕ Borehole Location
- Design Points
- Design Contours
0.1 m Contours
- Existing Contours
0.1 m Contours
- ▬ Earthwork / Geotechnical Section



**SECTION C-C'
SCALE 1:500**



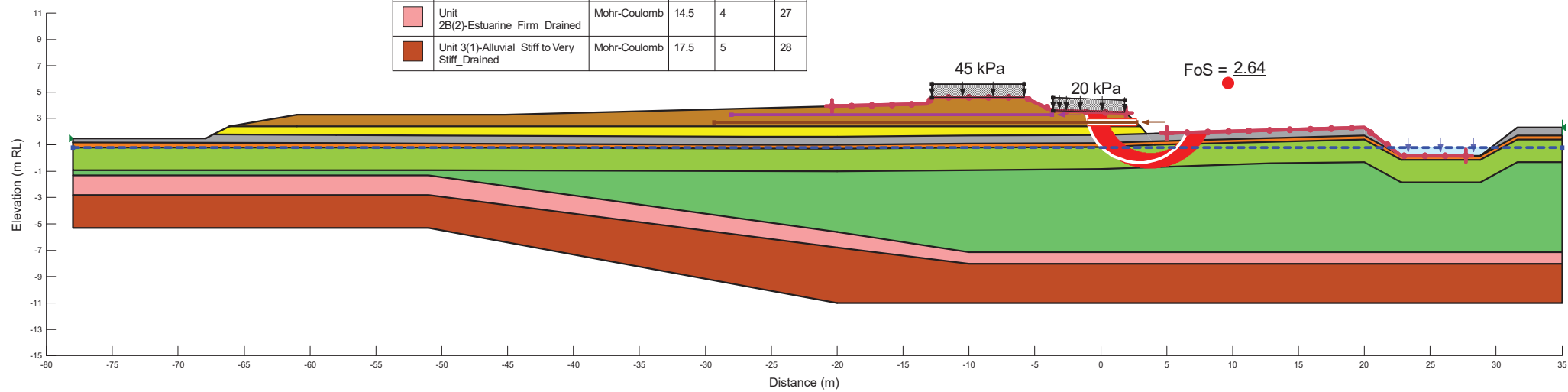
**SECTION D-D'
SCALE 1:500**



Title :	SECTIONS C-C' & D-D'	CLIENT: Manildra Group Pty Ltd	DATE: 03/06/2020	DRAWN BY: GRR	REVIEWED BY: KK	PROJECT No: 3001550	
Project :	Shoalhaven Starch Plant					DRAWING No: 006.2	
Site Location	Shoalhaven Starches, Bolong Road, Bomaderry					REVISION: -	

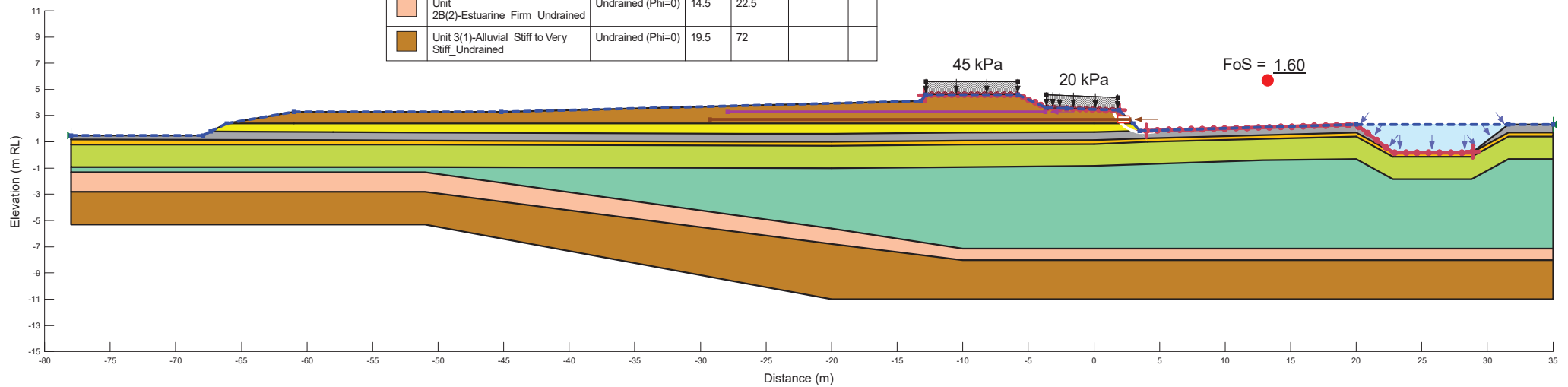
Section A - Case 3_Long-Term

Color	Name	Model	Unit Weight (kN/m³)	Cohesion' (kPa)	Phi' (°)
	Drainage Layer_Fill	Mohr-Coulomb	20	0	35
	Structural Fill_Drained	Mohr-Coulomb	20	5	30
	Topsoil	Mohr-Coulomb	17	4	27
	Unit 2A(1)-Estuarine_Very Soft to Soft_Drained	Mohr-Coulomb	13	2	25
	Unit 2A(2)-Estuarine_Very Soft to Soft_Drained	Mohr-Coulomb	14.5	2	25
	Unit 2B(1)-Estuarine_Firm_Drained	Mohr-Coulomb	15	4	27
	Unit 2B(2)-Estuarine_Firm_Drained	Mohr-Coulomb	14.5	4	27
	Unit 3(1)-Alluvial_Stiff to Very Stiff_Drained	Mohr-Coulomb	17.5	5	28

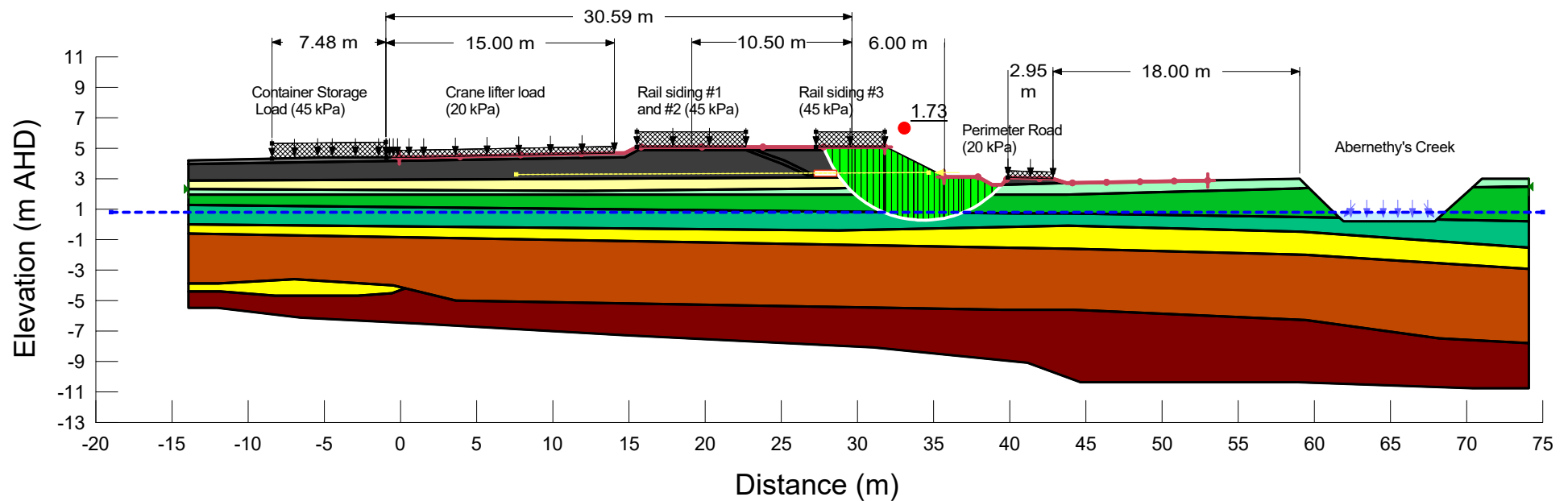


Section A - Case 4_Long-Term_Flooding

Color	Name	Model	Unit Weight (kN/m³)	Cohesion (kPa)	Cohesion' (kPa)	Phi' (°)
Yellow	Drainage Layer_Fill	Mohr-Coulomb	20		0	35
Brown	Structural Fill_Drained	Mohr-Coulomb	20		5	30
Grey	Topsoil	Mohr-Coulomb	17		4	27
Light Green	Unit 2A(1)-Estuarine_Very Soft to Soft_Undrained	Undrained (Phi=0)	13	9		
Teal	Unit 2A(2)-Estuarine_Very Soft to Soft_Undrained	Undrained (Phi=0)	14.5	17		
Orange	Unit 2B(1)-Estuarine_Firm_Undrained	Undrained (Phi=0)	15	45		
Pink	Unit 2B(2)-Estuarine_Firm_Undrained	Undrained (Phi=0)	14.5	22.5		
Dark Brown	Unit 3(1)-Alluvial_Stiff to Very Stiff_Undrained	Undrained (Phi=0)	19.5	72		

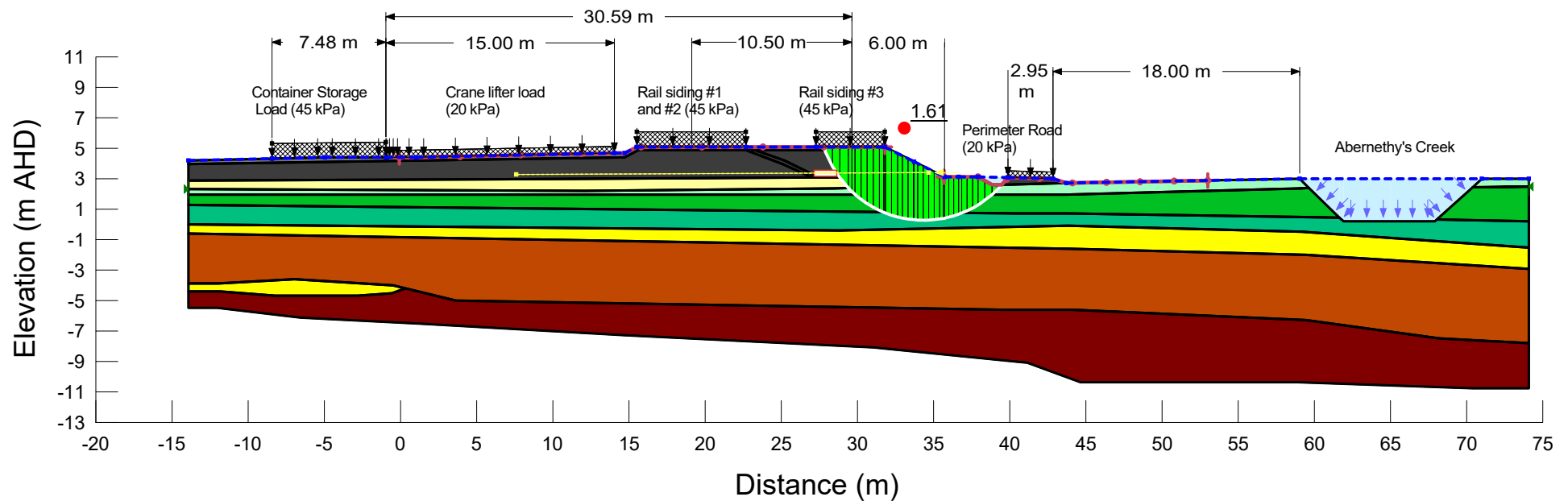


Color	Name	Model	Unit Weight (kN/m³)	Cohesion (kPa)	Cohesion' (kPa)	Phi' (°)
	Fill_Drainage Layer	Mohr-Coulomb	20		0	35
	Fill_Structural	Mohr-Coulomb	20		5	30
	Fill_Structural (Additional)	Mohr-Coulomb	20		5	30
	Unit 1_Topsoil	Mohr-Coulomb	18		4	27
	Unit 2A(1)_Estuarine - VS to S_undrained	Undrained (Phi=0)	14	10.8		
	Unit 2B(1)_Estuarine - F_undrained	Undrained (Phi=0)	16.5	31.5		
	Unit 2C_Estuarine_VL to L	Mohr-Coulomb	15		0	32
	Unit 3_Alluvial - St to VSt_undrained	Undrained (Phi=0)	16.5	58.5		
	Unit 4_Residual - VSt_drained	Mohr-Coulomb	19.5		10	30



Long Term_Normal Condition
12548413_Packing Plant_MOD21 Slope Stability Models.gsz
13/05/2021 1:400

Color	Name	Model	Unit Weight (kN/m³)	Cohesion (kPa)	Cohesion' (kPa)	Phi' (°)
	Fill_Drainage Layer	Mohr-Coulomb	20		0	35
	Fill_Structural	Mohr-Coulomb	20		5	30
	Fill_Structural (Additional)	Mohr-Coulomb	20		5	30
	Unit 1_Topsoil	Mohr-Coulomb	18		4	27
	Unit 2A(1)_Estuarine - VS to S_undrained	Undrained (Phi=0)	14	10.8		
	Unit 2B(1)_Estuarine - F_undrained	Undrained (Phi=0)	16.5	31.5		
	Unit 2C_Estuarine_VL to L	Mohr-Coulomb	15		0	32
	Unit 3_Alluvial - St to VSt_undrained	Undrained (Phi=0)	16.5	58.5		
	Unit 4_Residual - VSt_drained	Mohr-Coulomb	19.5		10	30

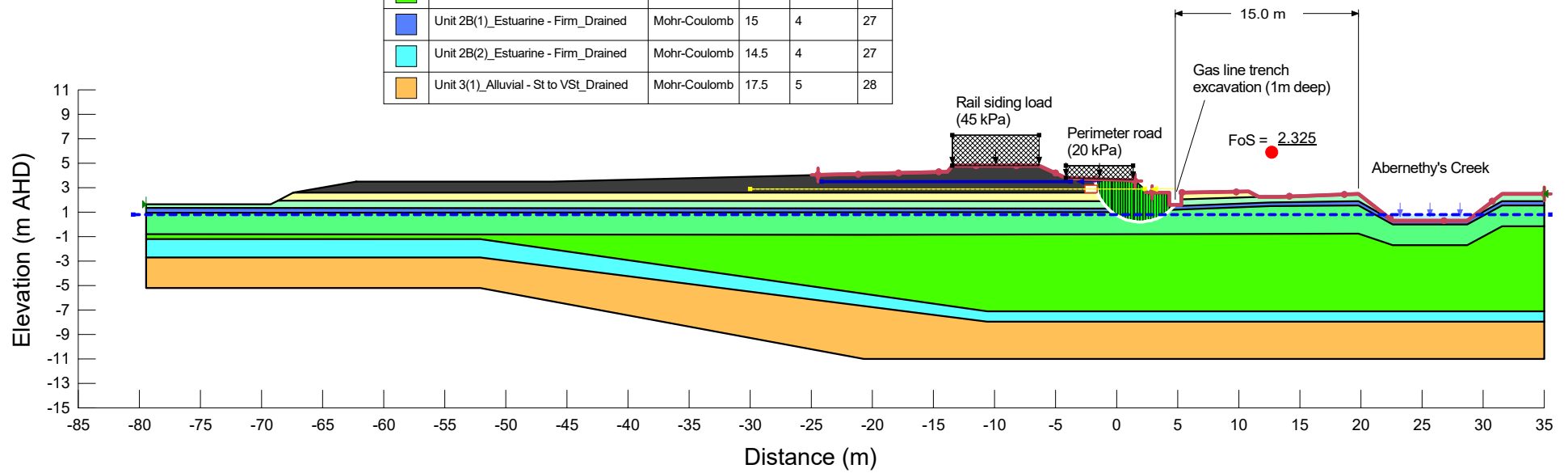


Long Term_Flood Condition
12548413_Packing Plant_MOD21 Slope Stability Models.gsz
13/05/2021
1:400

Appendix I

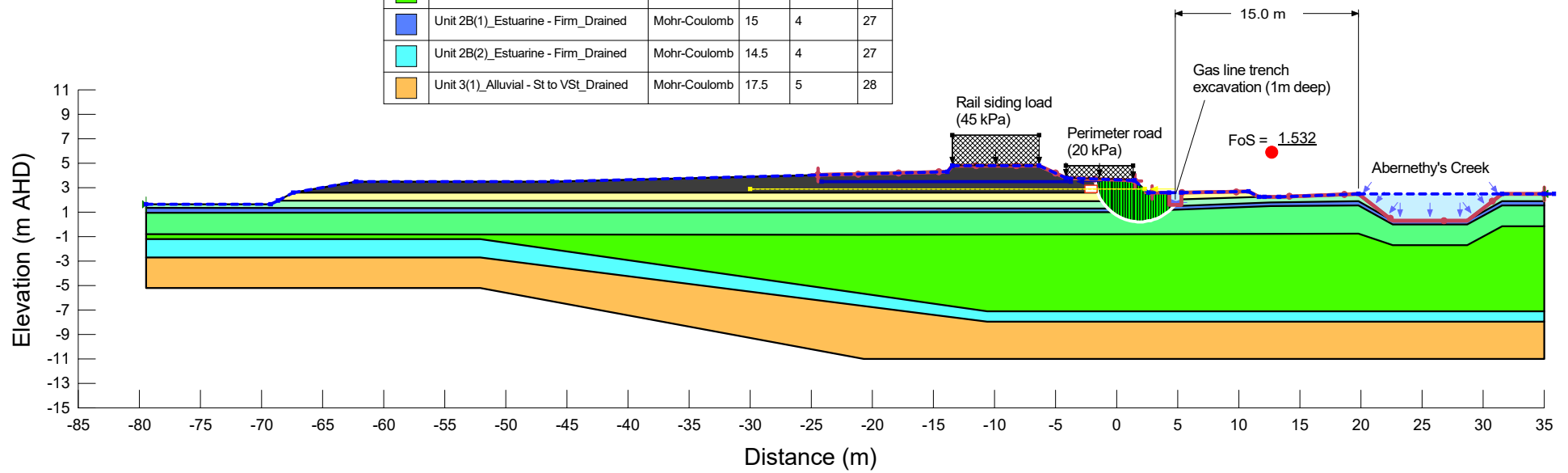
Slope stability models

Color	Name	Model	Unit Weight (kN/m ³)	Cohesion' (kPa)	Phi' (°)
	Fill_Drainage Layer	Mohr-Coulomb	20	0	35
	Fill_Structural	Mohr-Coulomb	20	5	30
	Unit 1_Topsoil	Mohr-Coulomb	17	4	27
	Unit 2A(1)_Estuarine - VS to S_Drained	Mohr-Coulomb	13	2	25
	Unit 2A(2)_Estuarine - VS to S_Drained	Mohr-Coulomb	14.5	2	25
	Unit 2B(1)_Estuarine - Firm_Drained	Mohr-Coulomb	15	4	27
	Unit 2B(2)_Estuarine - Firm_Drained	Mohr-Coulomb	14.5	4	27
	Unit 3(1)_Alluvial - St to VSt_Drained	Mohr-Coulomb	17.5	5	28



Long Term_Normal Condition
Section A-A 2021.06.10.gsz
10/06/2021 1:500

Color	Name	Model	Unit Weight (kN/m ³)	Cohesion' (kPa)	Phi' (°)
	Fill_Drainage Layer	Mohr-Coulomb	20	0	35
	Fill_Structural	Mohr-Coulomb	20	5	30
	Unit 1_Topsoil	Mohr-Coulomb	17	4	27
	Unit 2A(1)_Estuarine - VS to S_Drained	Mohr-Coulomb	13	2	25
	Unit 2A(2)_Estuarine - VS to S_Drained	Mohr-Coulomb	14.5	2	25
	Unit 2B(1)_Estuarine - Firm_Drained	Mohr-Coulomb	15	4	27
	Unit 2B(2)_Estuarine - Firm_Drained	Mohr-Coulomb	14.5	4	27
	Unit 3(1)_Alluvial - St to VSt_Drained	Mohr-Coulomb	17.5	5	28



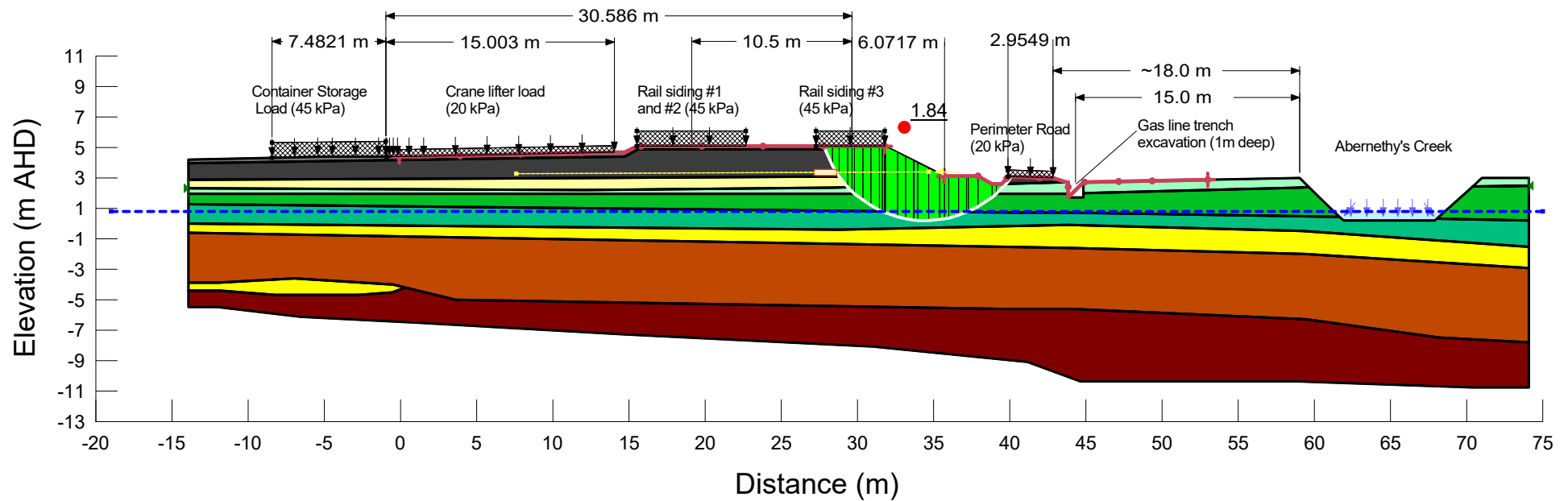
Long Term_Flood Condition

Section A-A 2021.06.10.gsz

10/06/2021

1:500

Color	Name	Model	Unit Weight (kN/m³)	Cohesion (kPa)	Cohesion' (kPa)	Phi' (°)
	Fill_Drainage Layer	Mohr-Coulomb	20		0	35
	Fill_Structural	Mohr-Coulomb	20		5	30
	Fill_Structural (Additional)	Mohr-Coulomb	20		5	30
	Unit 1_Topsoil	Mohr-Coulomb	18		4	27
	Unit 2A(1)_Estuarine - VS to S_undrained	Undrained (Phi=0)	14	10.8		
	Unit 2B(1)_Estuarine - F_undrained	Undrained (Phi=0)	16.5	31.5		
	Unit 2C_Estuarine_VL to L	Mohr-Coulomb	15		0	32
	Unit 3_Alluvial - St to VSt_undrained	Undrained (Phi=0)	16.5	58.5		
	Unit 4_Residual - VSt_drained	Mohr-Coulomb	19.5		10	30



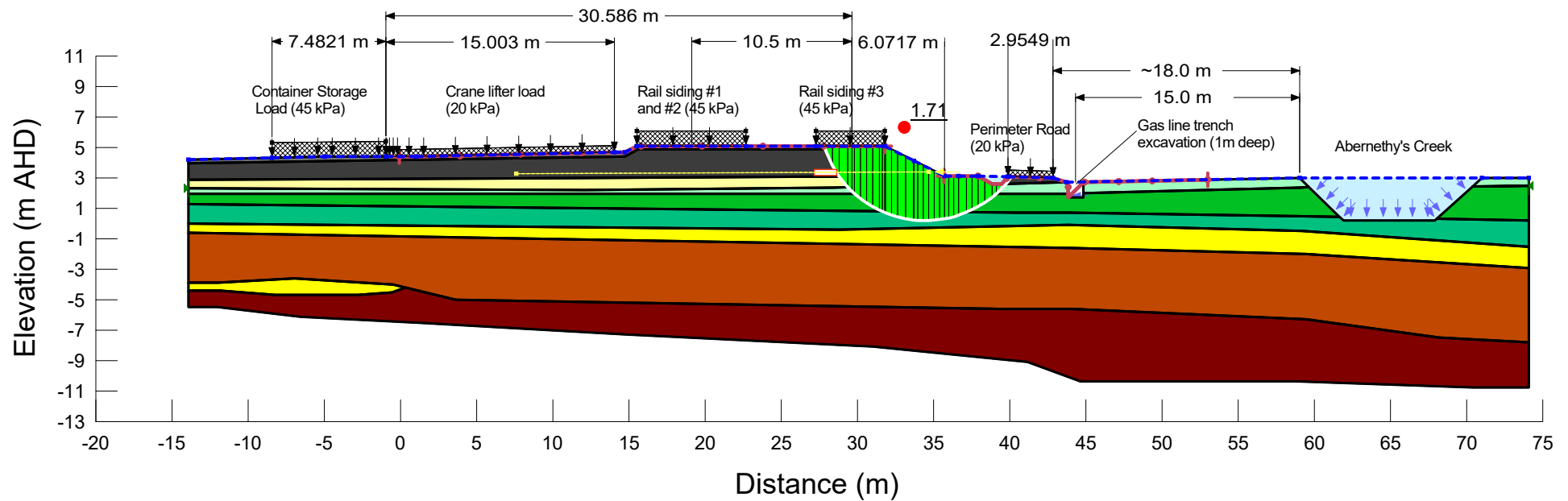
Long Term_Normal Condition

Section D-D 2021.06.10.gsz

10/06/2021

1:400

Color	Name	Model	Unit Weight (kN/m³)	Cohesion (kPa)	Cohesion' (kPa)	Phi' (°)
	Fill_Drainage Layer	Mohr-Coulomb	20		0	35
	Fill_Structural	Mohr-Coulomb	20		5	30
	Fill_Structural (Additional)	Mohr-Coulomb	20		5	30
	Unit 1_Topsoil	Mohr-Coulomb	18		4	27
	Unit 2A(1)_Estuarine - VS to S_undrained	Undrained (Phi=0)	14	10.8		
	Unit 2B(1)_Estuarine - F_undrained	Undrained (Phi=0)	16.5	31.5		
	Unit 2C_Estuarine_VL to L	Mohr-Coulomb	15		0	32
	Unit 3_Alluvial - St to VSt_undrained	Undrained (Phi=0)	16.5	58.5		
	Unit 4_Residual - VSt_drained	Mohr-Coulomb	19.5		10	30



Long Term_Flood Condition

Section D-D 2021.06.10.gsz

10/06/2021

1:400



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