



Report

North Shearwater Estate (Stages
One to Three and Rehabilitation
Area)

Aboriginal Cultural Heritage Assessment

Wolin Investments Pty Ltd

5 February, 2020

Rev 7 (Final)

Report Details

North Shearwater Estate (Stages One to Three and Rehabilitation Area) - Aboriginal Cultural Heritage Assessment

Job #: J0190046, Folder #: F15963, Revision: 7 (Final), Date: 5 February, 2020

Filename: 15963 TL Shearwater ACHA Report Rev7.docx

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History

Date	Revision	Comments
31 May, 2019	A	Issue for Client and registered Aboriginal parties
1 July, 2019	1	Final Issue
2 July, 2019	2	Revised Issue
8 July, 2019	3	Revised Issue
8 November, 2019	4	Draft Issued to Client for Review
2 December, 2019	5	Revised draft
5 December, 2019	5c	Revised Draft
11 December, 2019	5e	Revised Draft for Critical Review
17 December, 2019	5f	Draft Issued for Critical Review
6 January, 2020	6	Draft Issued for Registered Aboriginal Parties Review
5 January, 2020	7	Revised Issue



Endorsements

Function	Signature	Name and Title	Date
Prepared by		Jake Brown Archaeologist	5 February, 2020
Checked and Authorised for Release by		Dr Rod Bennison Lead Environmental Scientist	5 February, 2020

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EXECUTIVE SUMMARY

Advitech Pty Limited (trading as Advitech Environmental) was engaged by Tattersall Lander on behalf of Wolin Investments Pty Ltd to undertake an Aboriginal Cultural Heritage Assessment (ACHA) of the North Shearwater Estate (Stages One to Three and Rehabilitation area). This is to assist in gaining development approval for the North Shearwater Residential Estate at Tea Gardens. At present, Stages One to Three and the rehabilitation area are currently in development, and Stages Four and Five are planned future works. The location is approximately 48 kms north east of Newcastle and approximately 4 kms north of Tea Gardens.

The environmental context of the study area indicates that the most likely use would have been opportunistic hunting and gathering. The regional environmental context dominated by the coast and waterways, is evident at the North Shearwater site with the Myall River bordering the property to the east. The Monkey Jacket Creek is also partially within the property boundaries. The environmental context since colonisation has been dominated by agriculture, especially cattle grazing. This has also facilitated infrastructure and land clearing. Nearby water sources may have been able to provide access to flora and fauna, as well as potential for drinking water, if the salinity was not too high. The topography provides opportunity for ridge lines and crests. However, the contours indicate that a 10 to 60m rise (east to west) exists and this may exceed an ideal slope for occupation or artefact finds. The project area has been subject to previous large-scale clearing, pastoral activities and infrastructure demands such as dams, roads, and powerlines.

Previous regional and local archaeological assessments provide an outline of past Aboriginal land uses. Due to the coastal influence, middens have been documented at a number of sites, as close as 1.5 km from the study area. The regional pattern also presents stone artefacts and open campsites as examples of evidence of human occupation. It can be predicted from the previous assessments that early regional occupation was strongly connected to waterways and coastal areas.

Based on the environmental and archaeological contexts, it can be predicted that:

- A preference for sites within 50 metres of reliable water sources or a confluence of water sources, on ridge lines, spurs and on crests. There is an elevated position located within the study area and hydrolines are present in the study area;
- Previous finds in the area where ground disturbance has occurred, and the potential PADs indicate a likelihood for subsurface material;
- Sites/artefacts are more likely to be found on landforms with a slope no greater than 30 degrees, except where sandstone bedrock or limestone outcrops are present;
- Higher density of artefacts is likely to occur in stage four (outside the current study area); and
- Based on previous surveys the likely majority of finds will be flakes, flaked pieces anddebitage.

The survey resulted in no new finds or Potential Archaeological Deposits and given past surveys and disturbance for almost 200 hundred years, it is unlikely that other artefacts are located in the project area. As no sites were identified there are no impacts to the archaeological record and the following recommendations are made:

1. The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular

importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974; and

2. Should any Aboriginal objects be uncovered during works, activities should halt in that location and the Environmental Line contacted on 131 555 to report the discovery.

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Archaeological Report for North Shearwater

1. INTRODUCTION

Advitech Pty Limited (trading as Advitech Environmental) was engaged by Tattersall Lander on behalf of Wolin Investments Pty Ltd to undertake an Aboriginal Cultural Heritage Assessment (ACHA) for the North Shearwater Residential Estate at Tea Gardens. At present, Stages One to Three and the rehabilitation area are in development, and Stages Four and Five are planned future works. This assessment relates to Stages One to Three and the Rehabilitation area. The project area is located approximately 48 kms north east of Newcastle and approximately 4 kms north of Tea Gardens.

It should be noted that this report was prepared by Advitech Pty Limited for Wolin Investments Pty Ltd ('the customer') in accordance with the scope of work and specific requirements agreed between Advitech and the customer. This report was prepared with background information, terms of reference and assumptions agreed with the customer. The report is not intended for use by any other individual or organisation and as such, Advitech will not accept liability for use of the information contained in this report, other than that which was intended at the time of writing.

1.1 Purpose of Report

The purpose of this Aboriginal Cultural Heritage Assessment Report (ACHAR) is to consult the Aboriginal community to understand the cultural heritage values that exist in the development area.

1.2 The Proposed Activity

Stages One to Three will be subject to residential subdivision (**Figure 2** and **Figure 3**; detailed plans see **Appendix IV**). Planned activities include excavation, infrastructure projects (powerlines, roads), housing development, recreational facilities, tree removal and environmental control techniques including sediment basin. The rehabilitation area (E2 land) impact will mostly be limited to minimise cuts and maximise fill in the E2 lands. As at 22 November this is still in consultation with MidCoast Council and an indicative plan is included as **Figure 4** and **Figure 5**.

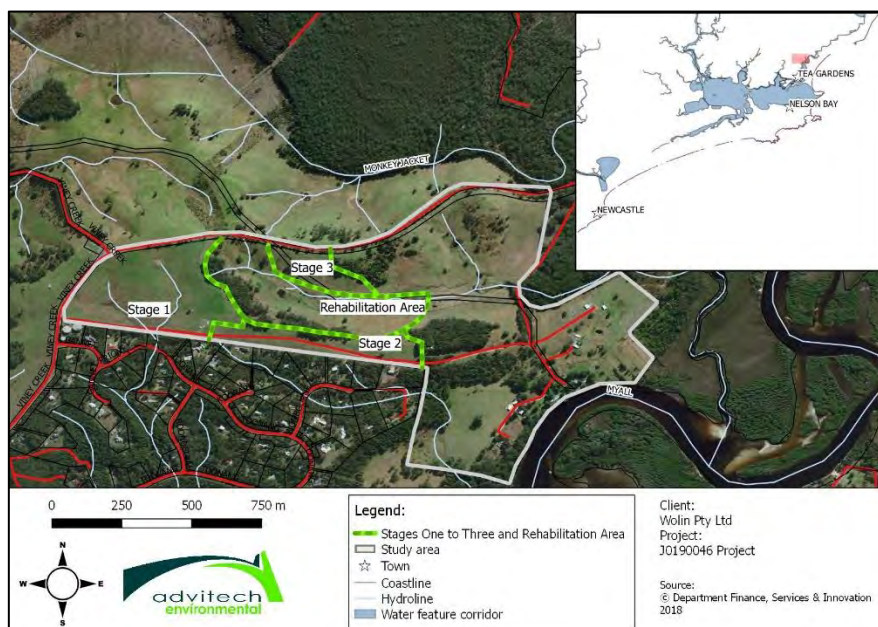


Figure 1: Study area location



Figure 2: Tattersall Lander Plan Stages One and Two planned subdivision

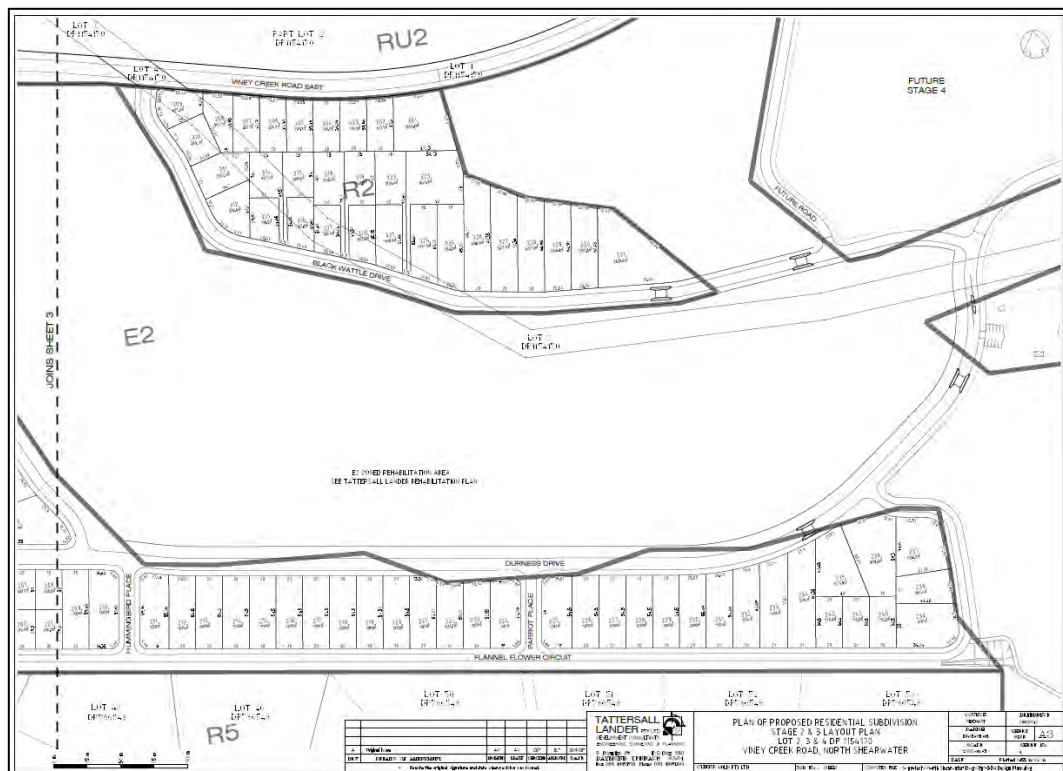


Figure 3: Tattersall Lander Plan Stages Two and Three planned subdivision

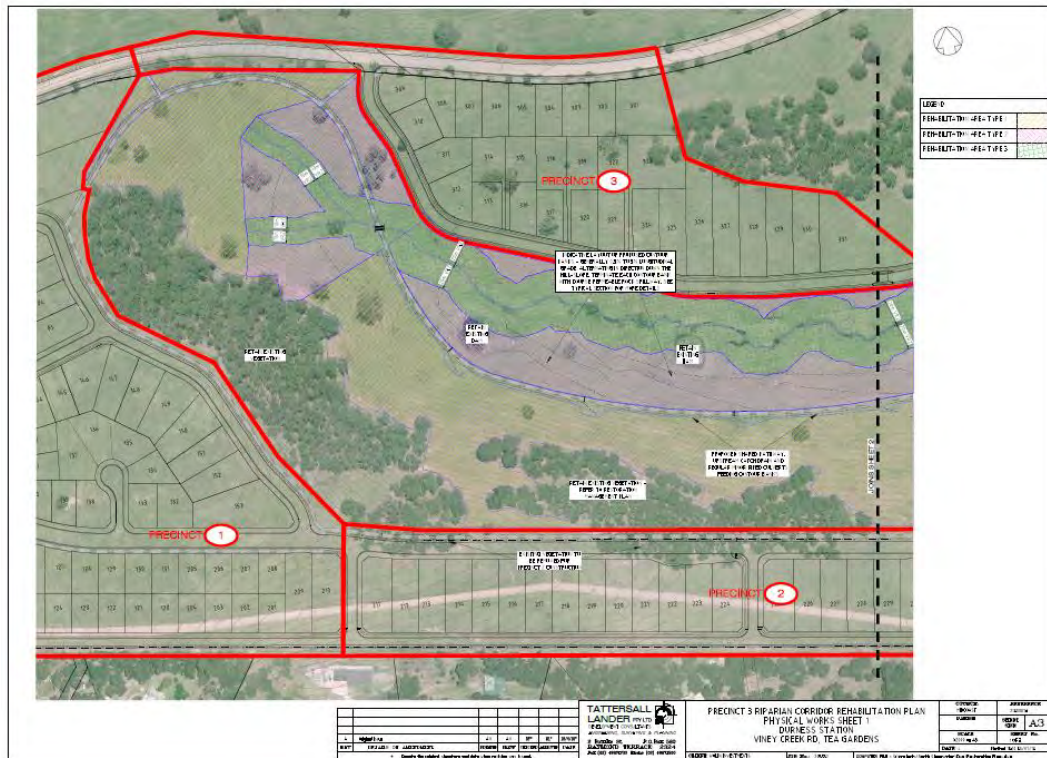


Figure 4: Tattersall Lander Indicative Plan for Rehabilitation Area page 1

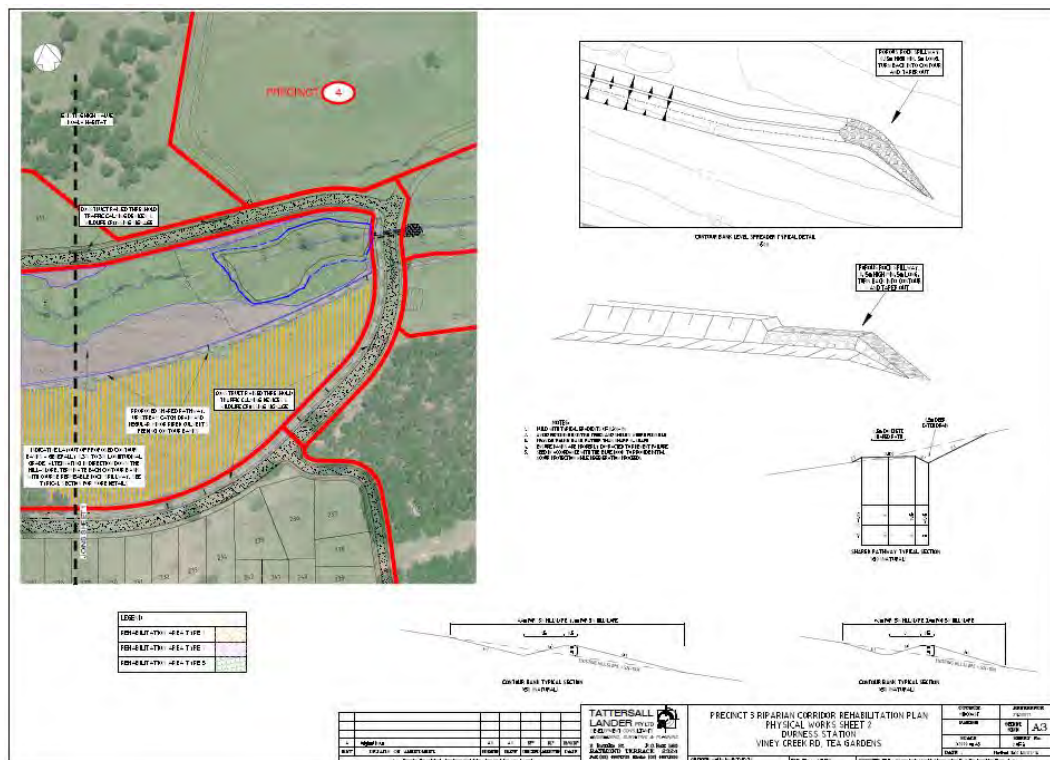


Figure 5: Tattersall Lander Indicative Plan for Rehabilitation Area page 2

1.3 Investigators and Contributors

Jake Brown, Archaeologist, has three years of experience in Aboriginal archaeological assessments, research, reporting, analysis and consultation. This experience has included cataloguing stone artefacts from the Hunter region, conducting field surveys, and monitoring of potential find sites during surface/subsurface disturbance across central and northern Queensland. Jake's educational qualifications include a Bachelor of Social Science (Hons) in Sociology and Anthropology, University of Newcastle 2015, and a Graduate Certificate of Archaeology from Flinders University 2017. Jake is a member of the Australian Archaeological Association. Jake Brown prepared the report, participated in the field activities and community consultation.

Jessica Blackman, Archaeologist, has six years of experience in Aboriginal archaeological assessment, cultural heritage management, reporting, analysis, and community consultation. Jessica's training in the mining and minerals industry has allowed her to gain extensive experience in field heritage survey and assessment, artefact and cultural site identification and cataloguing, and land access facilitation through meeting internal and regulatory compliance obligations. Jessica has worked in Queensland, New South Wales and the Northern Territory. She holds a Bachelor of Arts with an extended major in archaeology and anthropology (University of Queensland 2011) and a Native Title Masterclass Certificate (James Cook University 2015). Jessica is a member of the Australian Archaeological Association (AAA), the Australian Society for Historical Archaeology (ASHA), The Lithics Studies Society and the World Archaeological Congress. Jessica Blackman participated in the field activities, review of the initial report and community consultation.

Dr Penny McCardle is an archaeologist qualified in both indigenous archaeology (20 years) and forensic anthropology (16 years). Penny has practical experience in all types of archaeological assessments ranging from small developments to large scale research/management projects and mine site investigations. She has extensive practical experience in research, survey, excavation, reporting and Aboriginal community consultation. She has an understanding of indigenous cultural heritage (including shell middens, stone tools, occupation sites, art, sacred sites, burials, mortuary practices, skeletal identification, etc.). Penny also has an understanding of archaeological theoretical and analytical issues and remains up to date with issues relating to her profession. Penny is a Forensic Anthropologist and works with the Department of Forensic Medicine Newcastle, the NSW Forensic Services Group, NSW Police and the Biodiversity and Conservation Division in regard to skeletal remains, recovery and identification (including Aboriginal and non-Aboriginal). She presents basic theories of archaeological recovery and skeletal identification to the Forensic Services Group Hunter Zone - Forensic Investigators. Penny communicates effectively with professional clients and government departments, and has a sound knowledge of the legislative process, (both State and Federal) guiding the management of indigenous places and sites of cultural importance. She has developed professional working relationships with the relevant heritage bodies, Local Aboriginal Land Councils and other Aboriginal groups throughout NSW. Dr Penny McCardle provided an in-depth critical review of the report.

Dr Rod Bennison is an environmental specialist with over 20 years of experience (over 15 in a consulting environment). Rod has diverse expertise in construction management and social research and is responsible for managing construction projects, community liaison and public relations strategies and services, and environmental and social impact assessments. Rod manages and coordinates the provision of environmental and community relations services, including environmental planning, acoustics and air quality assessments, archaeological and ecological services. A biogeographer, ecologist and animal ethicist by profession, he is a certified Biodiversity Assessment Method Assessor (BAAS 19023) and contributes to the effective implementation of the BDAR. Dr Rod Bennison directed the project and provided general project oversight, quality assurance and financial management. He provided a review of this report and leads the environmental team at Advitech.

The Site officers were Mr David Kirk (Karuah Indigenous Corporation) and Mr John Feeney (Nur-Run-Gee). Mr Dave Feeney (Karuah Indigenous Corporation and Karuah Local Aboriginal Land Council) also participated in an onsite discussion on the Tuesday 28 May, 2019.

1.4 Legislation and Statutory obligations

All work described in this report was carried out in accordance with the following legislation:

- *National Parks and Wildlife Act, 1974* (NPW Act);
- *National Parks and Wildlife Amendment Regulation, 2009* (NPW Regulation);
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010a);
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b) insofar as this relates to the assessment; and
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011) insofar as this relates to the assessment.

Under the NPW Act, it is an offence to harm an Aboriginal object whether or not a person knows it is an Aboriginal object. Property owners, developers and land managers are required to consider their proposed activities, and whether any harm may occur to Aboriginal objects and places under several pieces of legislation. The NPW Act is administered by the Department of Planning, Industry and Environment (DPIE) and is the primary legislation for the protection of Aboriginal cultural heritage in New South Wales. Under Part 6 of the Act, it is an offence to knowingly harm or desecrate an Aboriginal object or Aboriginal place. If harm to an object or place is anticipated, an Aboriginal Heritage Impact Permit (AHIP) must be applied for and DPIE may issue an AHIP under s90 of the Act.

The following legislation also relates to the protection of Aboriginal Heritage:

Environmental Planning and Assessment Act 1979 (EPA Act)

The potential impacts of a development on Aboriginal heritage are a key component of the environmental impact assessment process under the EPA Act. In NSW, the EPA Act is the principal law overseeing the assessment and determination of development proposals which are considered under the Act.

Heritage Act 1977 (NSW) (the Heritage Act)

The Heritage Act protects the natural and cultural history of NSW with emphasis on non-indigenous cultural heritage through protection provisions and the establishment of a Heritage Council. While Aboriginal heritage sites and objects are protected primarily by the NPW Act 1974, if an Aboriginal site, object or place is of great significance it can be protected by a heritage order issued by the Minister on the advice of the Heritage Council.

The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (as amended 1987) (Commonwealth)

The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 protects areas and/or objects which are of significance to Aboriginal people and which are under threat of destruction. A significant area or object is defined as one that is of particular importance to Aboriginal people according to Aboriginal tradition.

The Aboriginal Land Rights Act 1983 (NSW)

The NSW Aboriginal Land Rights Act 1983 is administered by the Department of Human Services: Aboriginal Affairs NSW and establishes the NSW Aboriginal Land Council and local Aboriginal land

councils. The Act requires these bodies to take action to protect the culture and heritage of Aboriginal persons in the council's area and promote awareness in the community of the culture and heritage of Aboriginal persons in the council's area.

The Native Title Act 1993 (Commonwealth)

The Native Title Act 1993 provides the legislative framework to recognise and protect native title, establishes ways in which future dealings affecting native title may proceed and to set standards for those dealings, including providing certain procedural rights for registered native title claimants and native title holders in relation to acts which affect native title.

The Australian Heritage Commission Act 1975 (Commonwealth)

The Australian Heritage Commission Act 1975 established the Australian Heritage Commission, which assesses places to be included in the National Estate and maintains a register of these places, which are significant in terms of their association with particular community or social groups for social, cultural or spiritual reasons. The Act does not include specific protective clauses.

2. LANDSCAPE AND ENVIRONMENTAL CONTEXT

The North Shearwater development area is located approximately 48 kms north-east of Newcastle and 4 kms north of Tea Gardens. The development has five planned stages as follows (Figure 1):

- Stage One
- Stage Two
- Stage 3
- Rehabilitation Area
- Stage 4
- Stage 5

The approximate development area is 116 hectares. The land zoning indicates R2 low density, E2 environmental conservation, SP3 tourist, R3 medium density residential and RU2 rural landscape. The Durness homestead (in Stage Five of the development) is listed as locally significant in the Great Lakes Local Environmental Plan 2014 in Schedule 5 Part 1 Heritage Items.

2.1 Topography

The topography of the area is steeper towards the western side of the study area. The area varies from 60 m elevation in the west to 10 m in the east (see **Figure 1: Study area location**). The bioregion description from NPWS (2003, p.171) defines the topography as typically coastal sand barrier through low foothills and ranges and gorges of the escarpment, with increasing rainfall inland along this transect. It is clearly evident that Stages One to Three and the rehabilitation area are indicative of a low foothills environment.

2.2 Hydrology

The development site is situated at the southern end of the North Coast Bioregion within the Karuah Manning sub region. The Myall River borders the eastern and south eastern border of the lot/plan DP 1154170. The Myall River is considered a third order stream on the Strahler system (Department of Industry, 2018). Monkey Jacket Creek (second order stream) is within the eastern side of the lot; however, the development area stops approximately 150 m west of the creek. As can be seen in **Figure 1**, there are smaller waterways and human made water bodies throughout the rest of the development area. These are considered first order streams. The area is part of the Karuah catchment area, which covers 4,480 km² (Department of Industry n.d.).

2.3 Geology/Soils

The area is Quaternary period and the Wootten bed formed under the Carboniferous period. Based on the Newcastle geological map sheet 1562 (1966), the two geological areas represent approximately half of the site each. The North Coast Bioregion contains loams (red friable and clay), yellow earths, with yellow and brown earths found on hillcrests and slopes, and organic loams and deep siliceous sands and well developed podzols on alluvial plains and coastal dunes (NPWS 2003, p.172). The Great Soil Group map of NSW (OEH 2017) indicates podzols and yellow podzolic soils (less fertile granites and metasediments) are present at the site.

2.4 Geomorphology/Landforms

The lower area of the North Coast bioregion adjoining the Myall Lakes system has high foredunes, low inner barrier ridges, wide lake basins and high parabolic dunes meeting bedrock hills (NPWS 2003, p.172). Stages Four and Five of the development are indicative of foredunes and ridges, whilst Stages

One to Three are indicative of bedrock hills with an elevation between 10 to 60 m (see **Figure 1** and **Figure 6**).

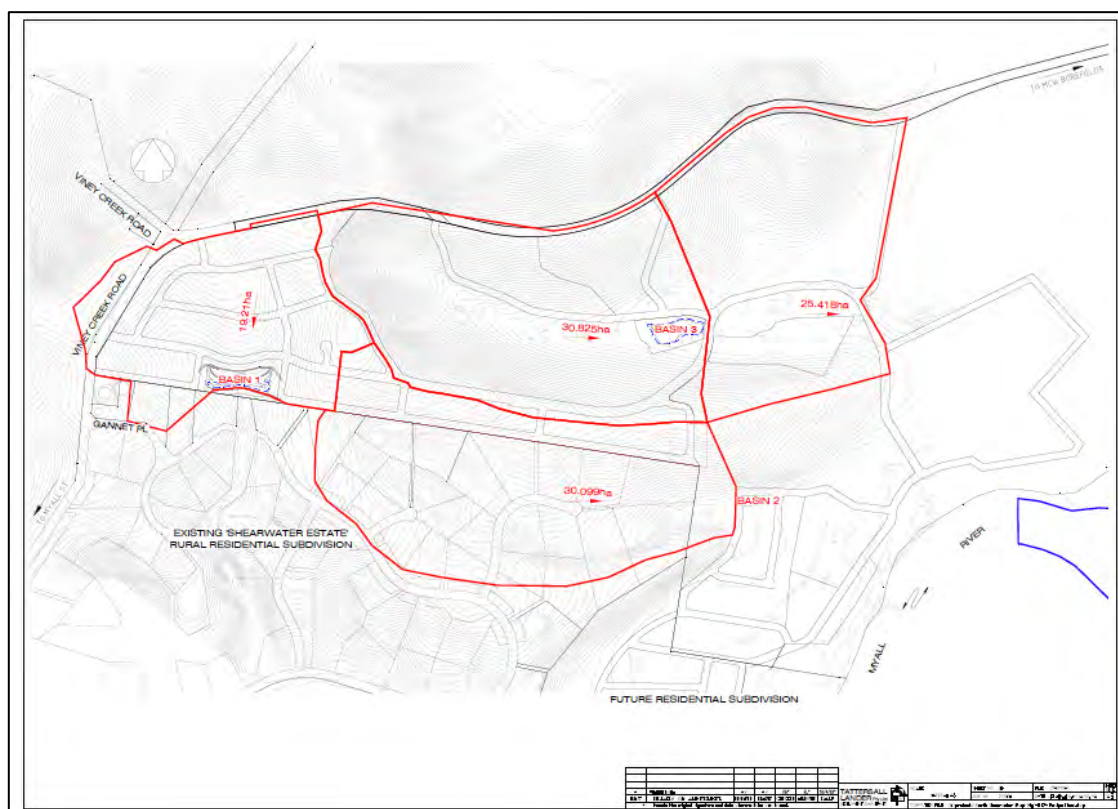


Figure 6: Tattersall Lander development map 21800061 with contours

2.5 Climate

The climate of the study area is located in the temperate climate zone. The mean temperature range record at the closest station (Nelson Bay) is a maximum of 34.9°C and a minimum of 4°C, while mean annual rainfall is 1341.9 mm further details in **Table 1** (BOM 2019).

Table 1: BOM Nelson Bay climate statistics 1914-2019 (red = high / blue = low)

Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean max temperature (°C)	27.4	27	25.9	23.6	20.8	18.2	17.5	18.9	21.4	23.2	24.7	26.1	22.9
Mean minimum temperature (°C)	19	19.1	17.8	15.3	12.4	10.2	9.1	9.9	12	14.1	16	17.7	14.4
Mean Rainfall (mm)	99.8	110.7	117.5	129.4	150.2	157.9	137.5	101.7	89	78.1	80.2	92.8	1341.9

2.6 Flora and Fauna

Whilst the majority of the landscape in the study area has been cleared for agricultural purposes, there are sections of the landscape that features open woodlands. The Manning Macleay sub-region in the North Coast Bioregion is classified as having:

Wet sclerophyll forest with white mahogany, small-fruited grey gum, Sydney blue gum, blackbutt, tallowwood and brush box. White gum, blackbutt, forest red gum and grey box on dry open flats. Dense Antarctic beech on Barrington tops and patches of mixed cool temperate and warm temperate rainforest on Comboyne Plateau on basalt. Coastal complex of banksia, paperbark, smooth-barked apple, and blackbutt with numerous shrubs and areas of heath and swamp on dunes. Mangroves in estuaries. (NSW NPWS 2003).

The vegetation that previously existed in the study area would have most likely provided habitat for many small mammals, birds and reptiles. Food, water and other resources required for Aboriginal occupation would have most likely been more plentiful on the surrounding coastline as evidenced by the presence of Aboriginal shell middens throughout Port Stephens and the region. Sokoloff (1976) wrote that the Worimi people managed their resources with skill and initiative. Animals hunted on the coastline strip included possums, native bees, kangaroo, flying foxes, birds and kangaroo rats. The Worimi were swift and agile in climbing trees and killing with stones, spears or the throwing stick. Fishing was undertaken with fish hooks (made from shell), spears and lines. Worimi women created implements and utensils from bark, plant, shell and bone. No scarring or modification of trees attributable to Aboriginal people was found during the 2018 survey and 2019 test excavation.

2.7 Landscape history, disturbances and impacts

A report by Insite (2009, pp. 27-29) details the history of the project area which is dominated by agriculture, particularly cattle grazing. Engel, Winn and Wark (2000, p.11) note that the area has been used for agricultural purposes since European colonisation from the mid-1820s, originally by the Australian Agricultural Company with the intention to farm sheep. In the 1830s, the study area became part of Bundabah Run. The area was unsuitable for sheep and was turned over to cattle; however, Engel, Winn and Wark (2000, pp. 68-69) state that the project failed and the area was again divided in 1867. In 1868 a lease including the current study area was granted and used for logging, agistment of cattle and horses as well as an orchard (Engel, Winn and Wark, pp. 2000, pp. 218-220). In 1902, 27,000 acres including the current study area were purchased forming Durness, which ran cattle, a dairy and blacksmithing (Engel, Winn and Wark 2000, pp. 255-256). From 1902 to present, the land continues to be used for pastoral purposes along with residential subdivision. This history details the clear agricultural use of the land along with the associated disturbance that is a by-product of the industry such as residential buildings, local population amenities (roads) and manufacturing.

The impact of the above mentioned land use can relate to disposition of cultural heritage items disturbance patterns. For example, Ammerman (1985, pp. 39-40) discusses the effect of agriculture (ploughing) on the distribution of stone artefacts with the result that the size of the artefact affected the distance that an item would move. The surface level, depth and slope also contribute to the potential for movement. Given the slope of the study area, this would affect the distribution rate. Rick (1976, pp. 141-144) discusses that morphology and ground cover influences the dispersal of items, with heavier and denser items more prone to downward slope movements. Balek (2002, pp. 48-49) also warns that a stable geomorphic surface does not mean that the soil is static, with biomechanical processes creating the potential for artefacts movement. The grass ground cover would provide limited resistant to item movement depending upon the size of the item. The level of impact can also depend upon the type of land use and movement patterns such as pedestrian, vehicle and animal. Weaver and Dale (1978, pp. 453-456) researched the impact of different movements on an area and determined slopes are more impacted than flat sites. Additionally, they also documented whilst horses and pedestrians have greater

impact on vegetation and soil downhill, motorbikes have a greater effect when travelling uphill. Given the nature of the project area with long-term pastoral use and vehicle use evident, as well as the sloping nature of the site, disturbance will have affected the distribution of any potential heritage items on the surface and to a relevant depth.

2.8 Environmental Context Summary

The environmental context of the study area indicates that the most likely use would have been opportunistic hunting and gathering. Nearby water sources may have been able to provide access to flora and fauna, as well as potential for drinking water, if the salinity was not too high. The topography provides opportunity for ridge lines and crests. However, the contours indicate that a 10 to 60m rise (east to west) exists and this may exceed an ideal slope for occupation or artefact finds. The landscape also represents modern pastoral practices and infrastructure demands such as dams, roads, and powerlines.

3. CONSULTATION PROCESS

3.1 Community Consultation

Community consultation was conducted by Advitech following the *NSW Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*. The consultation was conducted in four stages as described below and all communications are provided in Appendix II.

3.1.1 Stage 1: Notification of project proposal and registration of interest

Table 2 and **Table 3** relate to community consultation and follow NSW legislative guidelines. **Table 2** provides the list of departments contacted requesting a list of Aboriginal groups to contact and their responses.

Table 2: Initial Consultation Letters

Contacted party	Method	Date	Response
North East EPRG Regional Office	Post	13 March 2019	Replied with contact list
Karuah LALC	Post	13 March 2019	19/3/2019 - Registered. Recommended Karuah Indigenous Corporation
Registrar	Post	13 March 2019	No Reply
Worimi Nation	Post	13 March 2019	No Reply
NTSCORP	Post	13 March 2019	No Reply
Mid-Coast Council	Post	13 March 2019	No Reply
Hunter LLS	Post	13 March 2019	No Reply

The Newspaper advertisement was placed in the Newcastle Herald on the 14 March, and the Koori Mail and News of the Area on 13 March and a response for registration was due no later than 27 March 2019. Additionally, letters were sent to all parties listed by the above-named departments on the 13 March 2019 asking to register their interest in the project and consultation. The registered Aboriginal parties (RAPs) are provided in Table 3.

Table 3: Registered Parties

Registered Party	Representative	Date registered
Karuah LALC	Dave Feeney	19 March 2019
Karuah Indigenous Corporation	Dave Feeney	19 March 2019
Didge Ngunawal Clan	Paul Boyd and Lilly Carroll	21 March 2019
Worimi Traditional Owners Indigenous Corporation	Candy Towers	26 March 2019
Nur-Run-Gee Pty Ltd	Lennie Anderson	3 April 2019
Murra Bidgee Mullangari	Ryan Johnson and Shaun Carroll	3 April 2019
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	3 April 2019
A1 Indigenous Services	Carolyn Hickey	15 April 2019

3.1.2 Stage 2: Presentation of information about the proposed project

Information about the proposed North Shearwater development was provided to all RAPs on the 17 April (see **Appendix III**). The document included the project background, a survey methodology and request for information regarding the cultural heritage significance of the study area. A response to the draft methodology was requested no later than 28 June, 2019.

3.1.3 Stage 3: Gathering information about cultural significance

Responses to the request for information about the cultural significance of the North Shearwater development are summarised in **Table 4**.

Table 4: Replies from methodology and relevant information

Registered Party	Representative	Date received	Comments about report
Karuah LALC	Dave Feeney	2 May 2019	See Karuah Indigenous Corporation
Karuah Indigenous Corporation	Dave Feeney	2 May 2019	Dave believes there is a grinding groove and flakes from a previous inspection present in Stage One. The area provides a viewpoint for observing the ocean and good location for hunting. Other cultural items have been located in the Tea Gardens area and he wishes for a mutually beneficial outcome.
Didge Ngunawal Clan	Paul Boyd and Lilly Carroll		No comment
Worimi Traditional Owners Indigenous Corporation	Candy Towers	17 May 2019	Replied to methodology and asked if possible, to have three RAPs onsite.
Nur-Run-Gee Pty Ltd	Lennie Anderson	2 May 2019 - 24 May 2019	Communication about project details
Murra Bidgee Mullangari	Ryan Johnson and Shaun Carroll		No comment
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson		No comment
A1 Indigenous Services	Carolyn Hickey		No comment

3.1.4 Survey

The survey was conducted in the 27 and 28 May, 2019. The survey was attended by Jake Brown and Jessica Blackman from Advitech and David Kirk representing Karuah indigenous Corporation and John Feeney representing Nur-Run-Gee Pty Ltd. Dave Feeney also briefly attended site on the 28 May representing Karuah Local Aboriginal Land Council and Karuah Indigenous Corporation. Refer to **Sections 5 and 6** for further details.

3.1.5 Stage 4: Review of draft cultural heritage assessment report

A draft report was sent to all RAPs for review on the 6 January, 2020 and a response was requested no later than 4 February, 2020. **Table 5** summarises responses from the review of the draft ACHA by the RAPs.

Table 5: Review of draft assessment report

Registered Party	Representative	Comments about report
Karuah LALC	Dave Feeney	No comment
Karuah Indigenous Corporation	Dave Feeney	No comment
Didge Ngunawal Clan	Paul Boyd and Lilly Carroll	No comment
Worimi Traditional Owners Indigenous Corporation	Candy Towers	No comment (replied 5 July 2019 with no feedback was offered)
Nur-Run-Gee Pty Ltd	Lennie Anderson	No comment
Murra Bidgee Mullangari	Ryan Johnson and Shaun Carroll	No comment
Corroboree Aboriginal Corporation	Marilyn Carroll-Johnson	No comment
A1 Indigenous Services	Carolyn Hickey	No comment

A revised draft following consultation with DPIE (Biodiversity Conservation Division (BCD)) was sent for a further 28 day review period on the 6 January, 2020. See **Appendix II** for full report of replies from registered parties.

No responses were forthcoming from the revised report review period. A reminder email was sent to the registered parties on the 24 January, 2020.

4. CULTURAL CONTEXT

4.1 The Landscape and Cultural Heritage

The following is extracted from 'What is an Aboriginal Cultural Landscape?' (DECCW 2010):

All landscapes contain evidence of human use. The way that perceptions, beliefs, stories, experiences and practices give shape, form and meaning to a landscape is termed a cultural landscape (ACH 1998). An Aboriginal cultural landscape is 'a place or area valued by an Aboriginal group (or groups) because of their long and complex relationship with that land. It expresses their unity with the natural and spiritual environment and embodies their traditional knowledge of spirits, places, land uses, and ecology. Material remains of the association may be prominent but will often be minimal or absent.

The landscape scale of cultural heritage is similar to the concept of 'whole-of-landscape' in ecosystem conservation - just as there is connectivity between all parts of natural ecosystems (e.g. plants, animals, soils and water) there is connectivity between cultural objects and places through past human behaviour patterns. The cultural landscape concept emphasises the landscape-scale of history and the connectivity between people, places and heritage items. It recognises that the present landscape is the product of long-term and complex relationships between people and the environment.

Aboriginal cultural landscapes are comprised of:

Significant biodiversity and a diverse range of ecological systems and associations, all of which contributed to the continuing existence of Aboriginal peoples in the region over many thousands of years, and which are valued in different ways by Aboriginal communities today;

- *Material remains of this continuing occupation in the form of a diverse array of Aboriginal sites and places known to the Aboriginal communities, some of which will be recorded on the Department of Environment, Climate Change and Water's Aboriginal Heritage Information Management System.*
- *Extensive historical records from 1788 through to today which record observations of Aboriginal people and lifestyles, wars, massacres, social and cultural events, population census, social interactions, language etc, and which influence Aboriginal community values today.*
- *An Aboriginal population made up of people who have traditional association and knowledge of the region, as well as others who live, work and play within the region, all of whom may attribute various values with the area, derived from the distant and recent past, through to the present day.*

For Aboriginal people, the significance of individual landscape features is derived from their inter-relatedness within the cultural landscape. This means features cannot be assessed in isolation and any assessment must consider the feature and its associations in a holistic manner. This may require a range of assessment methods and will always require the close involvement and participation of Aboriginal people. By consulting with Aboriginal people and using the concept of cultural landscapes, the story behind the features can be told which demonstrates the associations that may exist between Aboriginal objects and other features within the landscape (DECCW 2010).

4.1.1 Cultural Context

Since colonisation, records of interactions and Aboriginal culture have been documented. Early explorers such as Charles Grimes noted physical and language differences to the Sydney Aboriginals

when he visited in 1795 (Port Stephens Council, n.d.). Other early records of the Worimi include Richard Dawson between 1826 to 1828 and William Scott in the 1850s (Dyall 2004, p. 4). The Worimi were recorded as having a number of tribes according to Enright (1900) and Sokoloff (1976) which include:

- Garuagal;
- Maiangal;
- Gamipingal;
- Garrawerrigal;
- Buraigal;
- Warringal;
- Birroongal;
- Birrimbai;
- Yeerungal; and
- Wallamba.

Other earlier sources include Enright (1899, 1900 and 1932) who recorded language, tools and cultural events such as initiation ceremonies in Port Stephens. Sokoloff (1976) details social and ceremonial aspects of the Worimi at Port Stephens which included dispute resolution, totems and marriage practices. Elkin (1932) also discusses language, totems and social organisation of the Worimi as well as including a brief description of the Worimi area which stretch to Maitland through Stroud and to the Pacific Ocean near tea Gardens. Brayshaw (1987) also provided a source on the Worimi people and other groups in the Hunter region documenting environmental use, cultural and dietary practices. Brayshaw (1987, pp. 40-41) also noted that the Worimi had frequently associated with the Awabakal to south and shared a language with the Gringai (west) and Birpai (north).

5. ARCHAEOLOGICAL CONTEXT

5.1 Regional Context

The regional archaeological context is provided by previous assessments that have tended to focus near the coast or prominent body of water (Pacific Ocean, Myall Lakes and Myall River). The most common finds reported were middens with stone artefacts, a modified tree and open campsite also documented. Due to the coastal influence, middens have been documented at a number of sites, as close as 1.5 km from the study area (ERM 2011; Dyall 1982; Silcox 1999; Brayshaw 1988; Dallas 1982; Villiers 1981). The regional pattern also presents stone artefacts and open campsites as examples of evidence of human occupation. It can be predicted from the previous assessments that early regional occupation was strongly connected to waterways and coastal areas.

Regional based assessments available from AHIMS are summarised below.

ARC Andrew Robert Consulting (2004) *Lakes Way Seven Mile Beach Heritage assessment*. Report to Optima Developments for Environmental Impact Statement, on behalf of Seven Mile Beach Pty Ltd.

An Aboriginal Heritage Impact Assessment was undertaken in 2004 in consultation with Forster Local Aboriginal Land Council. The site, located approximately 57 kilometres east of the current project area, adjoins Booti Booti National Park and previously had a sand mine operating on the land. Large sections of the land have limited disturbance, and is characterised as a coastal environment. An Aboriginal open campsite was discovered during the survey with scattered shell midden, stone artefacts and a scar tree present. The site had been disturbed by previous sand mining. Mitigation measures from Forster Local Aboriginal Land Council were recommended including a 25-30 m buffer around the scar tree.

ERM (2011) *Riverside at Tea Gardens Aboriginal Heritage Assessment*. Report to Crighton Properties Pty Ltd.

ERM (2011) undertook an assessment for a development located at Tea Gardens (located approximately 1.5 kilometres south of the current project area). The survey located one shell midden; however, it was noted that visibility was low due to site conditions (vegetation, inundation of ankle deep water, wetland) which may have affected the results.

ERM (2012) *Tanilba Northern Dune Heritage Assessment in Tanilba Northern Dune Sand Extraction Extension Environmental Assessment Report*. Report to Sibelco Australia Limited (formerly Unimin Australia Ltd).

This assessment was for a proposed sand extension area (located approximately 22 kilometres west of the current project area). The land and northern dune have had disturbance in the past for sand extraction and the landscape is characterised as a flat area with dune elevation to 18m. The area has pockets of vegetation remaining. The local Aboriginal community was consulted for the assessment. The results of the survey indicated that the area was a sensitive landscape for Aboriginal heritage due to the dune formation and surrounding AHIMS sites (open campsite and middens), though no sites were located during the survey. A monitoring methodology was provided in the report for land clearing.

Karuah Local Aboriginal Land Council (2018) *Cultural Heritage Assessment Karuah East Quarry Project - Modification Application (Mod.1) Pacific Highway, Karuah*. Report to Karuah East Quarry Pty Ltd.

An assessment for an additional area to be included in the existing Karuah East Quarry Project, this assessment was located approximately 14.5 kilometres west of the current project area. The landscape

of the area comprised steep rocky terrain with thick vegetation. The due diligence assessment did not find any potential Aboriginal cultural heritage items and the advice provided was to proceed with caution.

McCardle Cultural Heritage (2015) *Proposed Sand Quarry - Cabbage Tree Road, Williamtown Aboriginal Heritage Impact Assessment*. Report to Williamtown Sand Syndicate Pty Ltd for inclusion in Environmental Impact Statement prepared by Umwelt.

Undertaking an assessment for a proposed sand quarry at Williamtown, this assessment was located approximately 39 kilometres west of the project area. The site comprised 176 hectares and was characterised by dune crests, slopes and swales. Previous land uses include logging, agriculture, residential developments and mining. The study area had one registered AHIMS site. The site was relocated in the 2015 survey and had disturbance (motorcycle tracks) and was considered to have poor integrity. No additional sites were discovered. An Aboriginal Heritage Management Plan was recommended to be developed with the registered Aboriginal groups.

Myall Coast Archaeological Services (2016) *Lot 612 DP 1160096 Blackhead Road Hallidays Point*. Report to Coastplan.

The due diligence assessment was undertaken in conjunction with Forster Local Aboriginal Land Council (located approximately 70 kilometres east of the current project area). The landscape was been affected by pastoral and forestry activities. The landscape was described as a sloping coastal floodplain. The lot was assessed due to proposed land use rezoning. No heritage items were located during the survey.

RPS (2017) *Aboriginal Cultural Heritage Assessment Report Greenpoint Manufactured Home Estate*. Report to Lidbury, Summers and Whiteman.

This assessment, located approximately 54 kilometres east of the current project area, was continued on from a previous assessment during a proposed land use rezoning of vacant land. The area was classified as a coastal landscape (floodplain and heath swamp), that has had land clearing. The Aboriginal Cultural Heritage Assessment evaluated a midden documented from the previous survey and found it has local significance. The recommendations included an AHIP for the study area.

5.2 AHIMS sites

An AHIMS extensive search of the project area was conducted on 14 September, 2018, with a buffer of 200 metres (Appendix I). Two Aboriginal sites (PADs) were found to be within 200 metres the planned project area.

The results of the search are noted in **Table 6** below. The locations of all registered sites noted in this search are provided in **Figure 7**. **Figure 7 is not for public disclosure and should be removed prior to any further publication of this assessment.**

Table 6: AHIMS Sites within 1000m of study area

NPW Site No.	Site Name	Site Description
38-5-0301	Shearwater PAD 1	Potential Archaeological Deposit
38-5-0302	Shearwater PAD 2	Potential Archaeological Deposit

As well as the two previously recorded PADs, two additional sites, a PAD and an isolated artefact, were recorded during a 2018 due diligence assessment (Refer to Section 4.6) and subsequently were submitted onto AHIMS.

There are many variables that must be considered when using the Aboriginal Heritage Information System (AHIMS). More particularly, site coordinates, and descriptions are not always correct due to the following factors:

- Errors resulting from the evolution of subsequent computer systems used by DPIE that have failed to account for or correctly translate old coordinate systems, such as topographic map references, to new systems;
- Errors resulting from human error or incorrect descriptions of locality on the site cards submitted to AHIMS;
- Errors resulting from data input. Most commonly the naming of the correct mapping system used; and
- Few sites have been updated on the AHIMS register to record if they have been subject to a s87 or s90 permit and, as such, what sites remain in the local area and what sites have been destroyed is unknown.

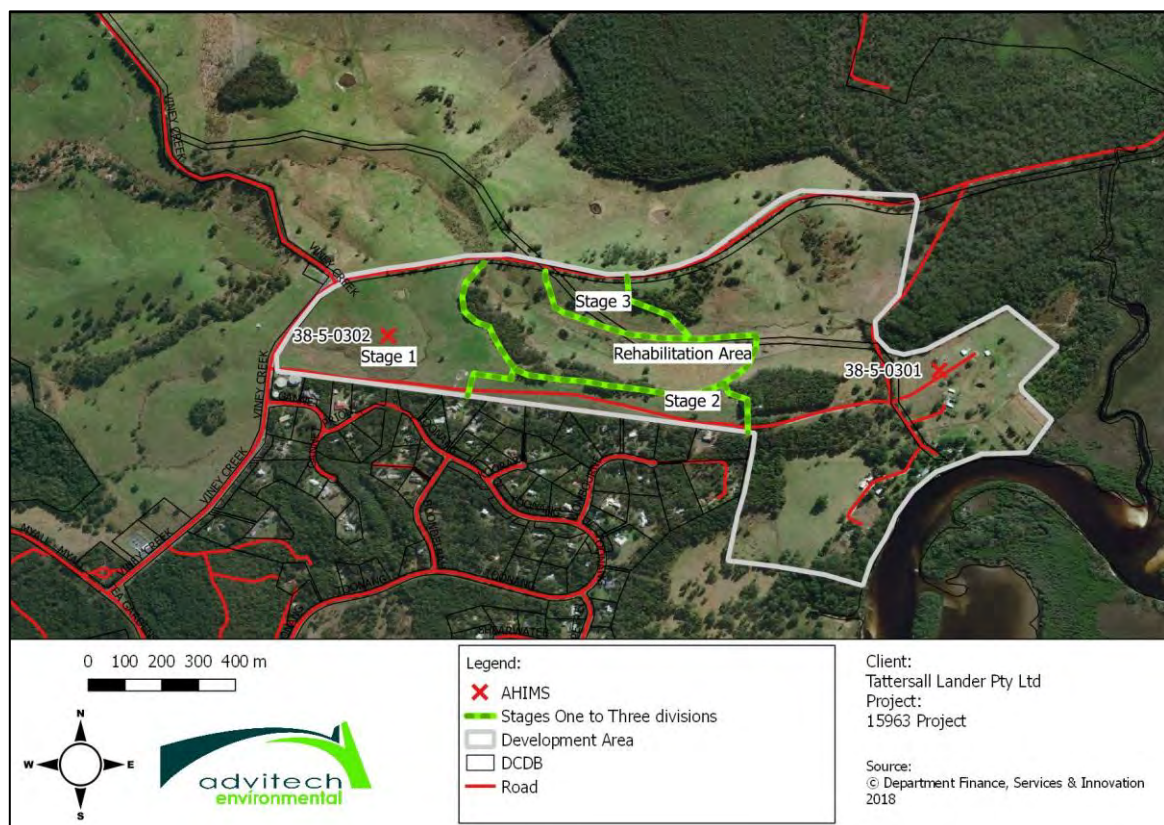


Figure 7: AHIMS search results (NOT FOR PUBLIC DISCLOSURE)

5.3 Previous Archaeological Assessments within the project area

Four previous assessments have been undertaken within the project area as follows:

- Insite Heritage (2009);
- AMBS (2009);
- AMBS (2010); and
- Advitech (2018).

Following is a review of each of these reports.

Insite Heritage (2009) *Aboriginal and European Heritage Assessment North Shearwater Precinct: Local Environment Study*. Report to GeoLink Pty Ltd.

The survey identified two PADs (see **Figure 8**) that covered large portions of Stages One and Five. The identification of the PADs was based on mapped Pleistocene sands, limited surface visibility and a cited lack of previous subsurface testing in the Hawks Nest area. It was recommended that test excavations should occur after consultation with a geomorphologist to determine subsurface potential. This was supported by the community consultation with the Karuah Local Aboriginal Land Council. A scatter of whelk shells was also located in this survey, however disturbance to the area disrupted the original context of what was described as a potential midden (Insite 2009).

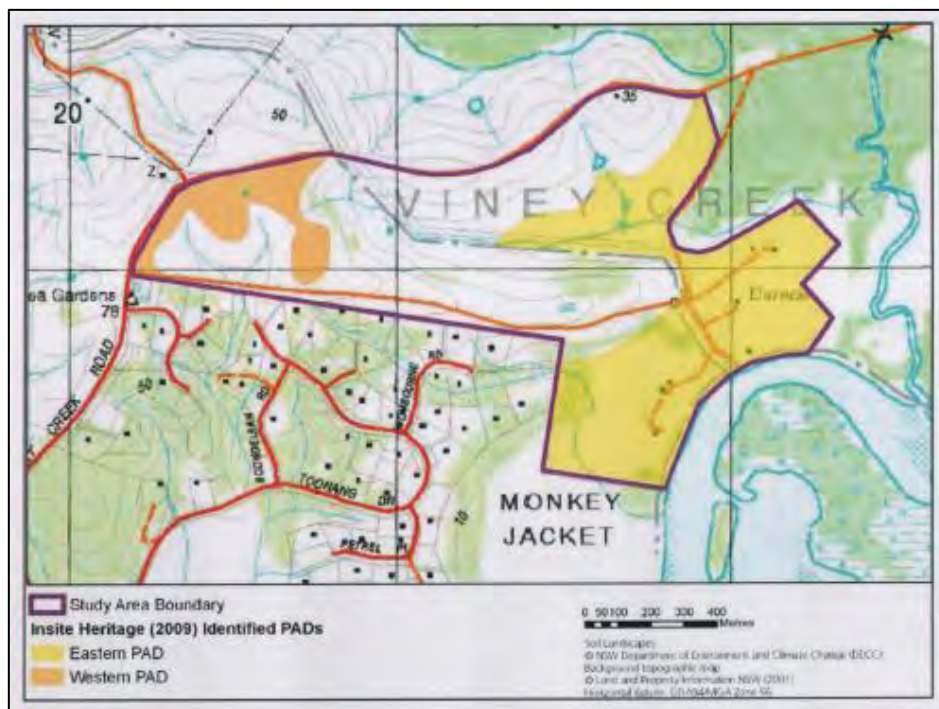


Figure 8: PADs mapped by Insite Heritage (2009). ABMS (2009) map

AMBS (2009) *Archaeological and Geomorphological Review for North Shearwater Precinct - Local Environmental Study*. Report to RPS Harper Somers O'Sullivan.

A geomorphological assessment was undertaken to identify if Pleistocene deposits were present in the project area. The assessment concluded that sands below the surface were from the Holocene and this reduced the potential for PADs. This assessment clarified three archaeological sensitive areas within the project area and were identified through geotechnical testing within the original determined areas. The western PAD area in Figure 10 was deemed the correct size due to the geotechnical testing as well as that other area surrounding the refined PAD were too steep to support subsurface deposits as well as previous erosion in the area. The eastern PAD was refined and determined to be Holocene in origin, with potential on the crests of low rises for subsurface deposits.

The sizes of the two previously identified PADs were greatly reduced due to the results of this assessment (see **Figure 9**).

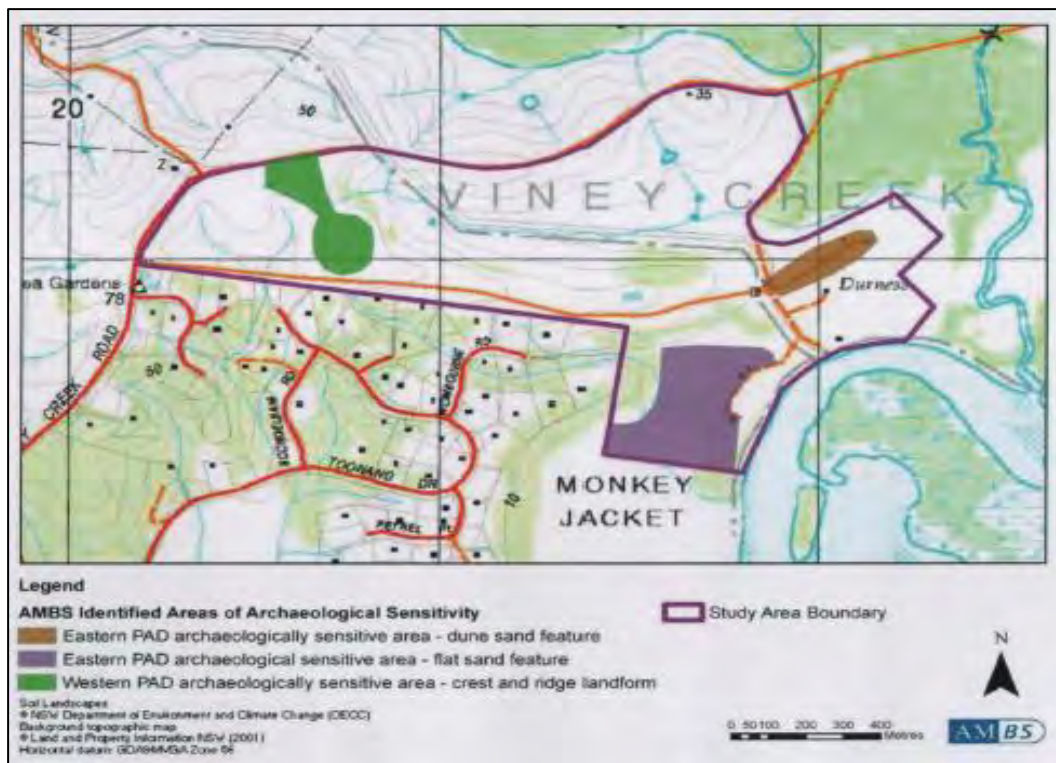


Figure 9: ABMS (2009) redefined PADs

AMBS (2010) *Archaeological Test Excavation Research Methodology: North Shearwater Precinct*. Report to Great Lakes Council.

A test excavation methodology was developed to determine if evidence of past Aboriginal land uses was present within the project area. Three transects with 15 test pits of 1 m² were recommended (see **Figure 10**). Consultation with the Karuah LALC suggest that sites exist in the nearby area and, it was noted that watercourses hold significance and could yield sites if further work is conducted. As far as this study is aware only a test excavation methodology was provided, and no test excavation was undertaken.

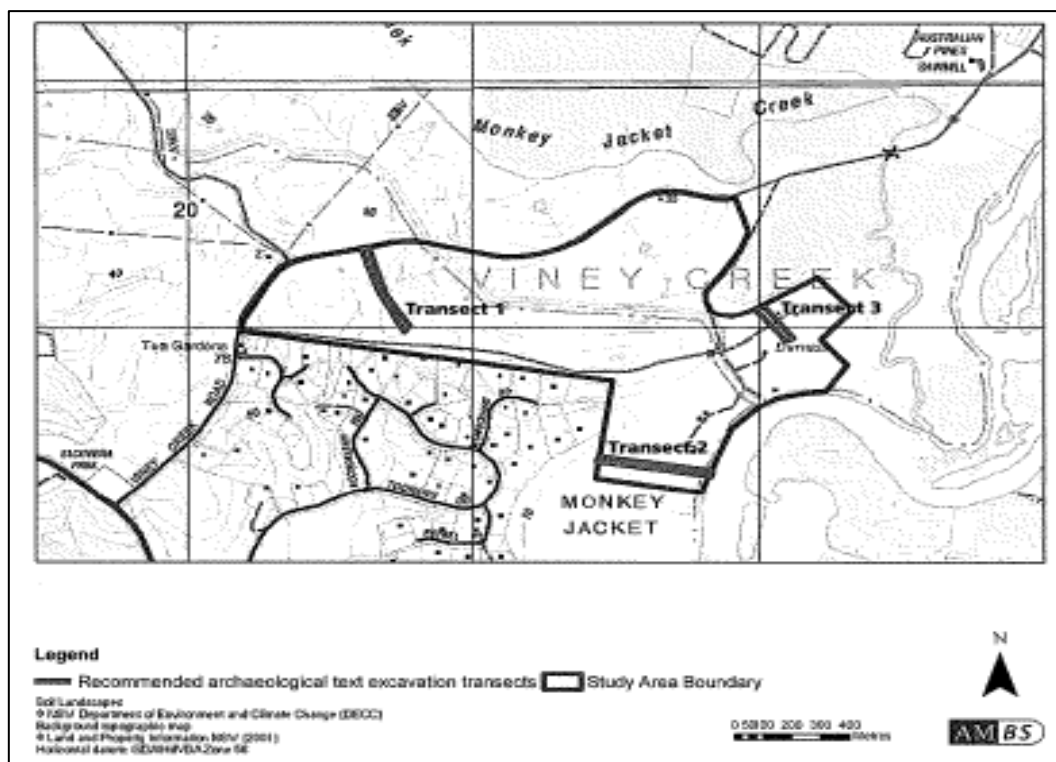


Figure 10: Proposed transects of test excavation ABMS (2010)

Advitech (2018) North Shearwater Estate (Stages One to Three). Report to Tattersall Lander on behalf of Wolin Investments.

Advitech undertook a due diligence assessment in 2018 that consisted of two site visits. The first site visit included an overview of all five stages of the development and the previously redefined identified PADs. The survey was undertaken using transects spaced to visually cover between 10 and 20 m depending on ground visibility in different areas.

Three artefacts were identified during the survey in Stage Four which became 38-5-0348 and 38-5-0349. 38-5-0358 was two isolated flakes approximately 5 metres from each other (**Figures 11 and 12**). 38-5-0349 was an isolated artefact (flake) (**Figure 13**) that was considered a part of a Potential Archaeological Deposit (PAD) due to large ground disturbance with sandy soil and is within the original PAD classified by Insite heritage (2009) (**Figure 8**). These three items were registered on AHIMS as 38-5-0348 and 38-5-0349 (**Table 7**).

Table 7: Site Location Table (NOT FOR PUBLIC DISCLOSURE)

Name	Site Type	Easting	Northing
38-5-0348	Artefacts	421924	6389449
38-5-0349	Potential Archaeological Deposit	421936	6389524

A second site visit was undertaken with local Aboriginal community members and surveyed Stage One only due to the previously allocated higher cultural potential. A total of three machine damaged items were found in the western PAD and were thought to have cultural origins by the community representatives. Two of the items were machine damaged rock fragments. The Aboriginal members also asserted that a 'potential grinding groove' was located within Stage One, which this report considers to

be machine damage. Due to a lack of diagnostic features and other supporting evidence documented in the subsequent excavation report (**Appendix V**), these items are not considered sites.

Other comments made by the Aboriginal community members included the potential for a campsite due to landscape features, a men's site, a corroboree ground, or a trail from the Karuah River. This was based on a discussion in Stage One about the community representative's inclination about the study area, particularly Stage One and the visible tree line of the rehabilitation area. No indication for any of these items being located in Stages One to Three were noted at that time by the archaeologist on site.



Figure 11: Artefact found at PAD located in Stage Four of the development 3 December 2018



Figure 12: Artefact located in Stage Four of the development 3 December 2018



Figure 13: Artefact located in Stage Four of the development 3 December 2018

5.3.1 Existing Predictive Models of Past Aboriginal Land Use

The main aim of this assessment is to attempt to define both the potential nature and extent of Aboriginal occupation across the study area. As a result, the nature of the analysis focused on both the landform units and known sites. The purpose of this strategy is to highlight any variations between sites and associated assemblages, landforms and resources across the area. In doing this, it is possible to identify variation across the landscape, landforms and assemblages that correspond with variation in the general patterns of landscape use and occupation. The nature of activities and occupation can often be identified through the analysis of stone artefact distribution across a landscape.

A general model of forager settlement patterning in the archaeological record has been established by Foley (1981). This model distinguishes the residential 'home base' site with peripheral 'activity locations'. Home base sites generally occur in areas with good access to a wide range of resources (reliable water, raw materials, and so on). The degree of environmental reliability, such as reliable water and subsistence resources, may influence the rate of return and length of occupation of sites and, hence, the complexity of evidence. Home base sites generally show a greater diversity of artefacts and raw material types (which represent a greater array of activities performed at both the site and immediate area).

Activity locations occur within the foraging radius (approximately 10km) of a home base camp (Renfrew and Bahn 1991). Based on the premise that these sites served as a focus of a specific activity, they will show a low diversity in artefacts and are not likely to contain features reflecting a base camp (such as hearths). However, it is also possible that the location of certain activities cannot be predicted or identified, adding to the increased dispersal of cultural material across the landscape. If people were opting to carry stone tools during hunting and gathering journeys throughout the area rather than manufacturing tools at task locations, an increased number of used tools should be recovered from low density and dispersed assemblages.

5.3.2 Refined predictive model

A predictive model of site types and site patterning for the study area is generally achieved through a review of previous archaeological studies undertaken throughout the locality and the region, the AHIMS register and the environmental context of the study area. The aim of a predictive model is to understand the nature of previous Aboriginal occupation and determine the nature of land use. This theme often aims to identify and explain archaeological patterning in site type, content and distribution. General archaeological theories have been developed outlining the relationship between land use patterns and the resulting archaeological evidence.

Comparable data from archaeological research within the locality to support a predictive model for the study area is disparate. However, and based on the landscape of an alluvial river plain, it is considered that in its natural condition, the study area would have historically provided Aboriginal people with a variety of flora and faunal resources. The Myall River and Monkey Jacket Creek are the nearest and relatively reliable sources of water. The Myall River borders the site in the east and the Monkey Jacket Creek is approximately 150 m east of the development boundary of the eastern most point. In accordance with Foley's model (1981), it is envisaged that the area was most likely used for opportunistic hunting or gathering of resources whilst accessing the watercourses.

Notwithstanding the predictive model above, the highly disturbed state of the study area removes virtually all likelihood for the presence of Aboriginal objects except in those areas which from previous assessment have been deemed sensitive. However, limitations should be noted with the predictive model when attempting to predict past human actions and behaviour, including:

- Biases due to differential sampling of landforms based on decisions made by archaeologists;
- Aboriginal people involved in previous studies or surveys may not have disclosed the existence of places with cultural heritage values as they may not have been under immediate threat when the earlier study was undertaken;
- Variation in the classificatory definitions employed by archaeologists will significantly influence the range of artefact types identified within a study area. For example, the distinction between a waste flake, adebitage flake and a flaked piece may be heavily subject to the perspective of the recorder. Thus, it is not productive to attempt to quantify the proportionate representation of artefact types identified in previous studies; and
- Levels of exposure of different landforms.

Based on the previous assessments and AHIMS results, a predictive model for the project area has been developed:

- A preference for sites within 50 metres of reliable water sources or a confluence of water sources, on ridge lines, spurs and on crests. There is an elevated position located within the study area and hydro lines are present in the study area;
- Previous finds in the area where ground disturbance has occurred, and the potential PADs indicate a likelihood for subsurface material;
- Sites/artefacts are more likely to be found on landforms with a slope no greater than 30 degrees, except where sandstone bedrock or limestone outcrops are present;
- Higher density of artefacts is likely to occur in stage four (outside the current study area); and
- Based on previous surveys the likely majority of finds will be flakes, flaked pieces anddebitage.

Following on from this, limitations may occur through the assumption of archaeological sensitive areas meaning a greater chance of artefact yield.

5.4 Predictive Model for the project area

The background literature, previous assessments and AHIMS results, provide an outline of previous or known Aboriginal use of the land. Use of the land can be confirmed through artefact and PAD location in stages Four and Five closer to the Myall River. The land has had extensive clearing and been subject to agricultural use since the mid 1820s. This has significantly reduced the potential for Aboriginal heritage to be evident on the surface through Stages One to Three and the rehabilitation area, unlike Stage Four where artefacts are more likely to be found due to sandy soils that have been less disturbed. Stage One has potential for subsurface deposits based on past research of the area. However, unlike Stages Four and Five, the areas under assessment have a greater elevation and may have reduced potential given the shallower nature of the soils.

6. 2019 SURVEY SAMPLING STRATEGY

Previous surveys have covered the study area in the past (Figure 14 and Figure 15). Due to ample survey coverage, the proposed survey sampling strategy is a random sample with an emphasis on Stage One, an area previously identified as having a higher likelihood of cultural materials. As described by Burke and Smith (2004, pp. 67-68), a chance pattern rather than a designed survey for the random sample was utilised rather than a reliance on a structured survey reinvestigation of the same area.

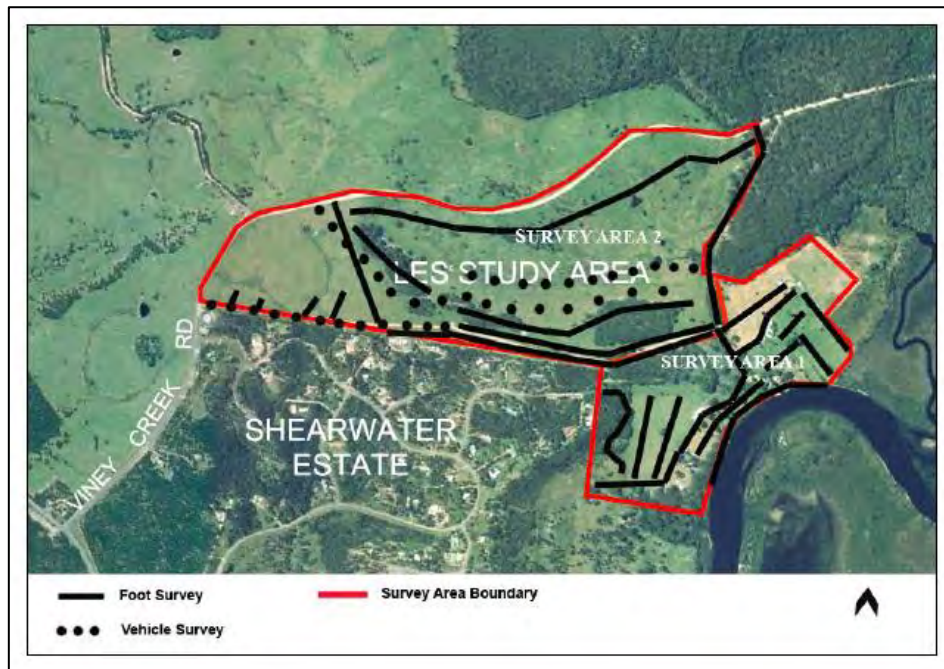


Figure 14: Insite heritage 2009 Survey Map

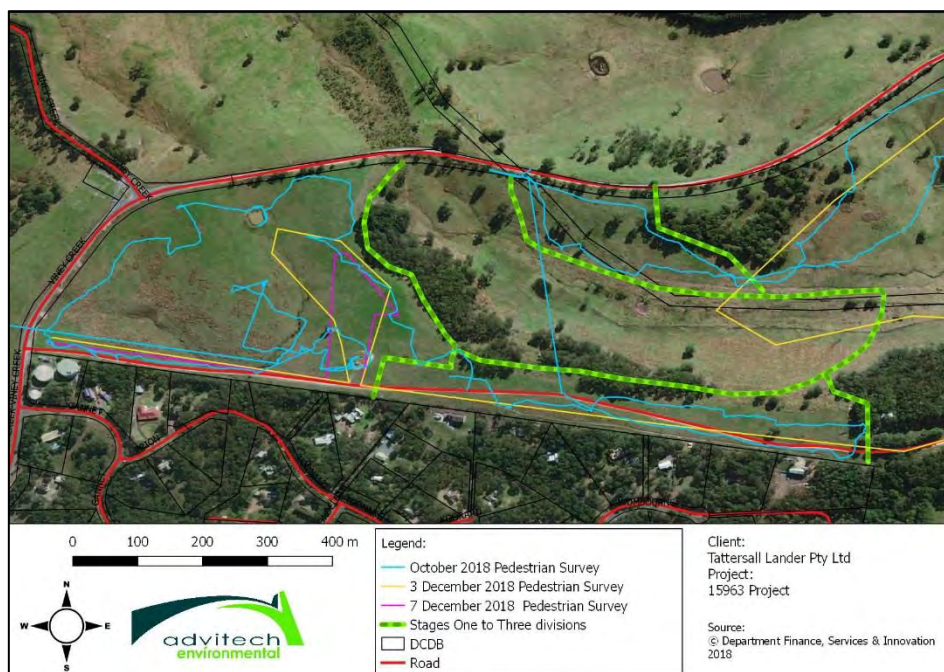


Figure 15: Advitech 2018 Surveys

7. RESULTS AND DISCUSSION

The survey focused on Stage One of the proposed development area which included the Western PAD and area. The area was surveyed in transects (1-2 metres in width) by 4 people.

Vegetation across the project area consisted of pasture grass with tufts of sparse grass approximately 30 cm tall. Trees border stage one in the Rehabilitation area to the north east and on subdivided blocks to the south. Disturbances at the site include infrastructure (powerlines, roads, debris/borrow pit, dam) and pastoral activities.

Visibility across the survey area was 60% and exposures 70% The overall effective coverage was 41% (Table 8 and Table 9)

Table 8: Survey effective coverage

SU	Landform	Area (sq m)	Vis. %	Exp. %	Exposure type	Previous disturbances	Effective coverage (sq m)	Effective Coverage %
1	Valley and ridge system	194484	60%	70%	Clearance Agriculture	Agriculture, residential infrastructure, quarrying/debris	81683	41%

Table 9: Landform

Landform	Landform area (sq m)	Area effectively surveyed (sq m)	% of landform surveyed	Number of Sites	Number of Artefacts or features
Valley and ridge system	194484	81683	41%	0	0

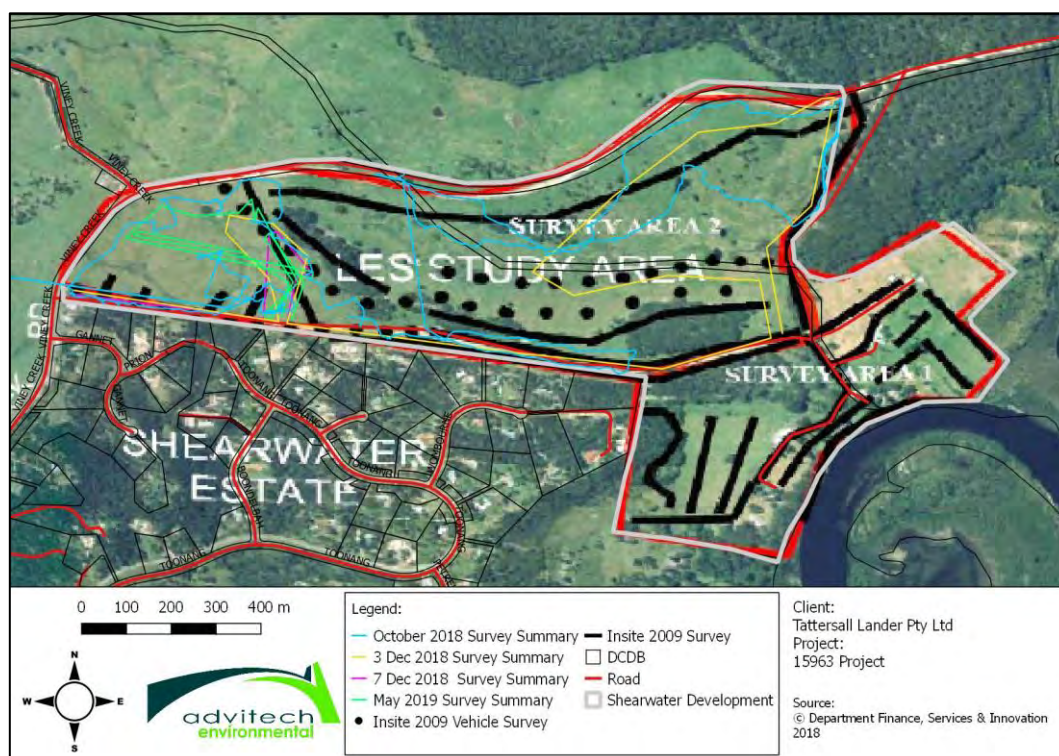


Figure 16: Map of Survey Effort 2009-2019 at North Shearwater

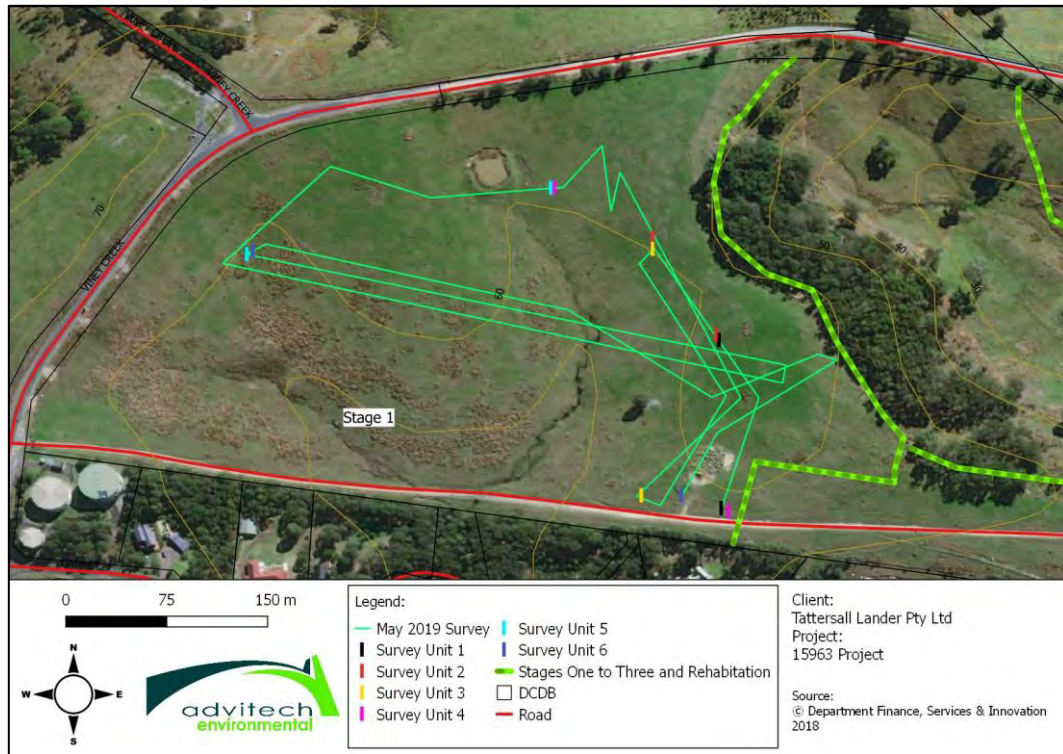


Figure 17: Random Survey Record Map

The machine damaged items were not relocated, and no new finds were located during the survey.

No archaeological sites were identified during the survey and this is likely due to a number of factors including:

- Distance from reliable water and subsistence resources indicates the project area was unlikely to have been utilised for camping;
- The project area may have been used for travel and/or hunting and gathering which manifest in the archaeological record as very low-density artefact scatters and/or isolated finds; and
- Past and present land uses would have displaced and/or destroyed any evidence of past Aboriginal land use.

7.1 Conclusion

Past occupation is known to occur in proximity to close water. Sites reduce in number further from water, with most sites located within 50 metres of the reliable water sources. The project area is located approximately 900 metres from Myall River (third order). The project area was unsuitable for sustained camping but may have been utilised for transitory movement or hunting/gathering activities only.

In relation to modern modifications of the landscape, previous large-scale clearing, grazing and residential development/infrastructure can be expected to have had moderate impacts upon the archaeological record.

8. CULTURAL HERITAGE VALUES AND STATEMENT OF SIGNIFICANCE

8.1 Cultural Significance

The Burra Charter (2013) defines 'cultural significance' very broadly to include 'aesthetic, historical, scientific, social or spiritual value for past, present or future generations'. This definition captures places of cultural significance to Indigenous cultures. It also includes places that provide a physical location that is integral to the existence, observation and practice of intangible heritage. The Burra Charter definition of cultural significance encompasses all forms of spirituality, regardless of the culture from which it emanates. Similarly, aesthetic value is not limited to a 'western' perception of aesthetics (taken from ICOMOS Practice Note: The Burra Charter and Indigenous Cultural Heritage Management).

8.1.1 Aesthetic Significance

The area has aesthetic value through the location and view of Yacaaba headland, Pacific Ocean and Port Stephens. The North Shearwater development area has a rural aesthetic.

8.1.2 Historic Significance

The current Durness property has historic connections that can be traced back to early colonial settlement from the 1820s. The history post settlement has been recorded and the Durness homestead is not a part of this assessment (Stage Five).

8.1.3 Scientific Significance

Scientific significance has been added to the project through the geotechnical research which proved that the soil landscape and geomorphology mapping was not accurate for the site. The assessment will provide additional information to other archaeological investigations in the region.

8.1.4 Social/Spiritual Significance

The general opinion of this report is that social and spiritual value based on past research and the community consultation is low. No information to further the social/spiritual significance was provided during the consultation. The survey led to no finds and given the disturbance that has occurred across the study area, it can be assumed that the area lacks physical evidence to warrant further investigation.

The significance of the scientific and cultural values that have been explored at the Shearwater study area are that the area has been studied over ten years and with a number of methods used such as pedestrian survey, vehicle survey, geotechnical testing, community consultation and test excavation. The surveys have proven that the study area of Stages One to Three and the Rehabilitation Area have not produced scientific data which could lead to a conclusion of significant cultural values being in the area. Cultural significance of the study area is limited, and it is hypothesised that the area would have had more value as a transitory location due to noted high salinity of local water sources, recorded midden approximately 1.5km south and no physical evidence within the study area.

9. ASSESSMENT OF IMPACTS

9.1 Impacts

The BCD (formerly DECCW) *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (2010b, p. 21) describes impacts to be rated as follows:

1. Type of harm: is either direct, indirect or none
2. Degree of harm is defined as either total, partial or none
3. Consequence of harm is defined as either total loss, partial loss, or no loss of value

The site will be developed into a residential housing estate. The rehabilitation area will be impacted through changes in accordance with the E2 land zoning such as water control.

It can be concluded that the survey and community consultation has identified considerable disturbance since European colonisation and further impacts to the area are unlikely to disturb Aboriginal heritage. No impact to heritage is expected in Stages One to Three and the Rehabilitation Area.

As no sites or PADs were identified in the project area, there are no impacts to the archaeological record.

10. MITIGATION AND MANAGEMENT STRATEGIES

Specific strategies considered below for the management of the study area relate to the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b), the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011), and the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010c).

10.1 Conservation/protection

Conservation is the first option considered and can be suitable for all sites, including high archaeological significance and/or cultural significance. Conservation considers the care required for an indigenous site or place so to retain its significance, whilst also managing the site in a way that considers the attachment that people have.

As no sites or PADs were identified conservation/protection is not required.

10.2 Further investigation

If an excavation is conducted in accordance with the *Code of Practice for Archaeological Investigations in NSW* than an Aboriginal Heritage Impact Permit (AHIP) will not be required. Subsurface testing is appropriate when a PAD with sub-surface Aboriginal objects that have potential conservation value has been identified and the area cannot be avoided.

As no sites or PADs were identified in this study, no further investigations is recommended.

10.3 AHIP

If the project cannot avoid harm to an Aboriginal object or Place, then an AHIP is required. This can allow for an appropriate strategy to be undertaken such as salvage excavation or surface collection that must be approved by the Biodiversity Conservation Division.

As no sites or PADs were identified an AHIP is not required.

11. RECOMMENDATIONS

11.1 General

1. The individual or persons responsible for the management of onsite works will ensure that all site personnel are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974; and
2. Should any Aboriginal objects be uncovered during works, activities should halt in that location and the Environmental Line contacted on 131 555 to report the discovery.

12. REFERENCES

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Appendix I

AHIMS Search

Not for public disclosure and should be removed prior to any further publication of this assessment

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Shearwater

Client Service ID : 370685

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
38-5-0301	Shearwater PAD 1	GDA	56	422000	6389000	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101531,10212 6,102127
	<u>Contact</u>	<u>Recorders</u>	Mrs.Angela Besant							
38-5-0302	Shearwater PAD 2	GDA	56	420500	6389100	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101531,10212 6,102127
	<u>Contact</u>	<u>Recorders</u>	Mrs.Angela Besant							

Report generated by AHIMS Web Service on 14/09/2018 for Rod Bennison for the following area at Lat, Long From : -32.6374, 152.154 - Lat, Long To : -32.6269, 152.1705 with a Buffer of 200 meters. Additional Info : ACHA. Number of Aboriginal sites and Aboriginal objects found is 2

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.



Appendix II

Community Consultation Log

1. ACHAR consultation log
2. Initial contact letters
3. DPIE reply letter with potential interested parties
4. Newspaper ad
5. Letters to potential interested parties
6. Test excavation notice to DPIE
7. Email to RAPs for methodology and draft ACHA report review
8. RAP methodology response
9. RAP draft ACHA report response
10. Intention to gain AHIP letter to RAPs
11. Response From RAPs regarding potential AHIP

Wolin Shearwater ACHA- JO190046 (F15963)

Date	Communication Type	Sent/Received	Advitec Personnel Making/Taking Comms	Internal/External Comms	Name of Sending/Receiving Stakeholder	Content of Comms	Actions
1/03/2019	Email	Sent By	Jessica Blackman	External	The Herald	Emailly enquiry for quote for public notices	
1/03/2019	Email	Sent By	Jessica Blackman	External	News of the Area	Emailly enquiry for quote for public notices	
1/03/2019	Email	Received By	Jessica Blackman	External	The Herald	Reply email with quote for notice	
1/03/2019	Email	Sent By	Jessica Blackman	External	The Herald	Acknowledged email quote	Follow up required
5/03/2019	Email	Received By	Jessica Blackman	External	News of the Area	Reply email with quote for notice	
6/03/2019	Email	Sent By	Jessica Blackman	External	Koori Mail	Request for quote and printing times	
6/03/2019	Email	Received By	Jessica Blackman	External	Koori Mail	Chris advised confirmation of proofs required by COB that day for publication on 13th March	Jess to get proof to Chris
6/03/2019	Email	Sent By	Jessica Blackman	External	Koori Mail	Sent ad proof to koori mail and requested an invoice to pay for this. Chris confirmed and accepted the proof for publication on the 13th March	
7/03/2019	Email	Sent By	Jessica Blackman	External	News of the Area	Advised the 13th as a run date for the ad and confirmed. JB advised she would send the finished ad template once it was created	Jess to get ad proof from Liz and send to NotA
7/03/2019	Email	Sent By	Jessica Blackman	Internal	Liz Firth	JB sent the paper column sizes and ad proof to Liz for both NotA and Herald and requested it be drawn up. JB advised Liz of the 13th as the run date.	

7/03/2019 Email	Received By	Jessica Blackman	External	News of the Area	Replied advising Monday the 11th at 5pm was the deadline for proofs	
7/03/2019 Email	Sent By	Jessica Blackman	Internal	Jake Brown	JB advised Jake of the proof deadline as she would be away on the Monday. Jake agreed to ensure it was sent to NotA in time.	
11/03/2019 Email	Sent By	Jake Brown	External	News of the Area	Ad sent for publication on 14 th March. Invoice will be sent end of the month.	publication of ad for consultation
12/03/2019 Email	Sent By	Jessica Blackman	External	The Herald	Sent proofs to Herald for publication on the 14th March. Enquired about payment terms.	
12/03/2019 Email	Received By	Jessica Blackman	External	The Herald	Reply with confirmation of March 14th run date. Advised Jess that there is an existing Advitech account with the Herald and asked if the ads could be charged to this. Jess agreed and asked for a receipt for reconciliation.	

13/03/2019 Letter	Sent By	Jake Brown	External	Sent to required parties under NSW legislation - Hunter LLS, Karuah LALC, Mid-coast council, Nelson Bay NP, Newcastle EPA, NTSCORP and Registrar	Letters sent for comment or registration of interest	
15/03/2019 Email	Received By	Jake Brown	External	Dave Feeney	Request for information about payment from December Due diligence Reply asking for invoice as not received in December.	
15/03/2019 Email	Sent By	Jake Brown	External	Dave Feeney	Invoice sent for Shearwater due diligence	Actioned payment
19/03/2019 Email	Received By	Jake Brown	External	Dave Feeney	Email sent to Dave to confirm invoice receipt and thanking him for registering interest.	
19/03/2019 Email	Received By	Jake Brown	External	Karuah Indigenous Corporation	Dave Feeney registered interest on behalf of Karuah Indigenous Corporation	
19/03/2019 Email	Received By	Jake Brown	External	Karuah LALC	Dave Feeney registered interest on behalf of Karuah LALC Paul Boyd and Lilly Carroll (directors)	
21/03/2019 Email	Received By	Jake Brown	External	Didge Ngunawal Clan Worimi Traditional Owners Indigenous Corporation	registered interest Candy Towers registered interest worimitoc@hotmail.com	
26/03/2019 Email	Received By	Jake Brown	External			

1/04/2019 Phone	Sent By	Jake Brown	External	OEH Newcastle (Conservation and Regional Delivery)	Letter received on the 20 th March. Reply should be this week.	
1/04/2019 Phone	Received By	Jake Brown	External	OEH Newcastle (Conservation and Regional Delivery) - Gillian Goode	Gillian called to address letter sent to OEH. Should have been addressed to OEH not EPA. Details will be sent by email to Jake.	
2/04/2019 Email	Received By	Jake Brown	External	OEH Newcastle (Conservation and Regional Delivery) - Gillian Goode	OEH stakeholder letter	Commencement of letters to parties who had not already registered
2/04/2019 Email	Sent By	Jake Brown	External	Murra Bidgee Mullangari Aboriginal Corporation	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Mur-Roo-Ma Inc.	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Myland Cultural & Heritage Group	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Nur-Run-Gee Pty Ltd	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Purfleet/Taree Local Aboriginal Land Council	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Wattaka Wonnarua CC Service	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Widescope Indigenous Group	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Yinarr Cultural Services	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Lee Davison	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Kevin Duncan	Registration of interest consultation letter	

2/04/2019 Email	Sent By	Jake Brown	External	A1 Indigenous Services	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Birpai Local Aboriginal Land Council	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Corroboree Aboriginal Corporation	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	D F T V Enterprises	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Forster Local Aboriginal Land Council	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Hunters & Collectors	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Kawul Pty Ltd trading as Wonn1 Sites	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Lakkari NTCG	Registration of interest consultation letter	
2/04/2019 Email	Sent By	Jake Brown	External	Lower Hunter Aboriginal Incorporated	Registration of interest consultation letter	
2/04/2019 Letter	Sent By	Jake Brown	External	Roger Matthews Consultancy	Registration of interest consultation letter	
2/04/2019 Email	Received By	Jake Brown	External	News of the Area Lennie Anderson (Nur-Run-Gee Pty Ltd)	Invoice received and sent for payment	
3/04/2019 Email	Received By	Jake Brown	External	Ryan Johnson (Murra Bidgee Mullangari)	Registered interest	lennie.anderson011@bigpond.com
3/04/2019 Email	Received By	Jake Brown	External			Shaun Carroll sent second email from same email address to register corporation. Email sent to clarify contact and corporation. ryananthonyjohnson@hotmail.com

3/04/2019 Email	Received By	Jake Brown	External	Marilyn Carroll-Johnson (Corroboree Aboriginal Corporation)	Registered interest	Provided response attachment with background details. Email - corroboreecorp@bigpond.com
9/04/2019 Email	Received By	Jake Brown	External	Joedie Lawler CEO Purfleet Taree LALC	Decline to register interest	Stated that Forster and Karuah LALCs are the relevant parties. Joedie included via CC Karuah and Forster CEOs.
9/04/2019 Email	Received By	Jake Brown	External	Kelly King Aministration Purfleet Taree LALC	Project not in LALC area, relevant LALC Forster or Karuah.	
15/04/2019 Email	Received By	Jake Brown	External	Carolyn Hickey (A1 Indigenous Services)	Would like to register interest for consultation and field work. Contact - Mobile: 0411650057 and Email: Cazadirect@live.com	
17/04/2019 Email	Received By	Jake Brown	External	Registered parties Lennie Anderson (Nur-Run-Gee Pty Ltd)	Methodology sent for review via email. End date 17 May 2019	
30/04/2019 Email	Sent By	Jake Brown	External		Sent request for field assistance	Reply received with details and confirmation
30/04/2019 Email	Sent By	Jake Brown	External	Dave Feeney	Sent request for field assistance	Reply received saying details such as insurance will be forwarded. Request that two field representatives attend due to OH&S. Reply sent saying only one spot is available and that OH&S about single work should be exceptable given three other personal on site.

2/05/2019 Email	Received By	Jake Brown	External	Lennie Anderson (Nur-Run-Gee Pty Ltd)	Inquired about duration of field work, reply sent saying approximately a week, could be less. Expected start time of 8-8:30 on site, with Jess and I driving up from Newcastle each day.
2/05/2019 Fax	Received By	Jake Brown	External	Dave Feeney	Methodology reply, Nominated Himself and David Kirk as cultural knowledge holders and Thought the area held cultural importance.
3/05/2019 Email	Received By	Jake Brown	External	Lennie Anderson (Nur-Run-Gee Pty Ltd)	Reply from previous email, thank you, please keep me up to date
7/05/2019 Email	Received By	Jake Brown	External	Dave Feeney	Insurance and confirmation that one person will be sent.
8/05/2019 Email	Received By	Jake Brown	External	Dave Feeney	car insurance received as well as rate. Reply sent confirming rate and insurance received and that I would be in touch the week before to confirm start time
15/05/2019 Phone	Received By	Jake Brown	External	Lennie Anderson (Nur-Run-Gee Pty Ltd)	wanted address of site and confirmation of time and date. Email sent with address details wanted address of site and confirmation of time and date. Email sent with address details

							Reply sent 20/05/2019 saying thank you for the methodology response.
						Replied to methodology and asked if possible to have 3 RAPS on site.	Unfortunately can not change number of participants at this stage as set up to pay for two.
17/05/2019	Email	Received By	Jake Brown	External	Candy Towers (Worimi TOC)		
20/05/2019	Phone	Sent By	Jake Brown	External	Lennie Anderson (Nur-Run-Gee Pty Ltd)	Called Lennie to discuss fieldwork and confirm estimated 27-29 May.	Email and telephone conversation.
20/05/2019	Phone	Sent By	Jake Brown	External	Dave Feeney	Called Dave to discuss fieldwork and confirm estimated 27-29 May.	Email and telephone conversation.
23/05/2019	Phone	Received By	Jake Brown	External	Dave Feeney	Dave called to confirm Karuah Indigenous Corp as party responding to field, asked whether Karuah LALC	
24/052019	Email	Received By	Jake Brown	External	Lennie Anderson (Nur-Run-Gee Pty Ltd)	Lennie sent an email saying John Feeney will be the rap on site and asked if possible to provide billing details and hours worked. Lennie not on site due to injury.	Reply sent confirming
30/05/2019	Email	Sent By	Jake Brown	External	Lennie Anderson (Nur-Run-Gee Pty Ltd) and Dave Feeney	Thanking them for fieldwork time	
31/05/2019	Email	Sent By	Jake Brown	External	Registered parties	ACHA draft for review	
31/05/2019	Email	Received By	Jake Brown	External	Lennie Anderson (Nur-Run-Gee Pty Ltd)	Invoice for fieldwork	Forwarded to client
6/06/2019	Email	Received By	Jake Brown	External	Dave Feeney	Invoice for fieldwork	Forwarded to client
21/06/2019	Email	Sent By	Jake Brown	External	Registered parties	Reminder that review period ends next Friday 28/6/2019	

5/07/2019 Email	Received By	Jake Brown	External	Candy Towers (Worimi TOC)	Message apologising for not replying by due date, Elder passed away.
8/07/2019 Phone	Received By	Jake Brown	External	Dave Feeney	Called Dave to ask about AHIP and KLALC keeping place - no answer 9:20 am. Missed return call and called back and had a discussion about keeping place (KLALC has a place but Dave would prefer to keep on site), Dave still adamant about groove.
8/07/2019 Email	Sent By	Jake Brown	External	All RAPS Lennie Anderson (Nur-Run-Gee Pty Ltd)	Email sent saying the AHIP is going ahead and relocation onsite is the preferred method after talking to KLALC. Any comments/opinions or questions let Jake know. Lennie agrees with KLALC about keeping items on site.
8/07/2019 Email	Received By	Jake Brown	External		
6/01/2020 Email	Sent By	Jake Brown	External	All RAPS	Revised draft sent for review ending 4/2/2020
24/01/2020 Email	Sent By	Jake Brown	External	All RAPS	Reminder sent to RAPS that review ends on the 4/2/2020

13 March, 2019

Hunter Local Land services
816 Tocal Road (Private Bag 2010)
Paterson NSW 2421
AUSTRALIA

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

Previous assessments at the site have identified the presence of Aboriginal archaeological sites, which require the preparation and submission of an AHIP prior to the proponent being granted development approval. An Aboriginal Cultural Heritage Assessment (ACHA) is also required to assist the applicant in the development of this AHIP; this ACHA will make provisions for test pitting to be conducted over areas of Potential Archaeological Deposits (PADs).

In accordance with NSW Government guidelines, Aboriginal people and or Aboriginal groups who hold cultural knowledge relevant to determining the significance of Aboriginal objects(s) and or place(s) relating to the proposed project area are invited to register an interest in a process of consultation as outlined in the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010). This is an invitation for Aboriginal people who hold cultural knowledge relevant to the proposed project area and who can determine the significance of Aboriginal object(s) and/or place(s) in this area of the proposed project to register an interest in a process of community consultation.

As per Section 4 of the Aboriginal Cultural Heritage Consultation Requirements for Proponents, you are advised of the following:

- 4.1.5 *The proponent must advise Aboriginal people who are registering an interest that their details will be forwarded to DECCW and the Local Aboriginal Land council (LALC), unless they specify that they do not want their details released.*
- 4.1.7 *LALCs holding cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area who wish to register an interest to be involved in consultation must register their interest as an Aboriginal organisation rather than as individuals.*

4.1.8 Where an Aboriginal organisation representing Aboriginal people who hold cultural knowledge has registered an interest, a contact person for that organisation must be nominated. Aboriginal cultural knowledge holders who have registered an interest may indicate to the proponent they have appointed a representative to act on their behalf. Where this occurs, the registered Aboriginal party must provide written confirmation and contact details of those individuals to act on their behalf.

Should you wish to register your interest in this project, or notify us of other persons who may be interested, please register in writing no later than **Wednesday 27 March, 2019** to:

Jake Brown
Advitech Environmental Pty Ltd
PO Box 207
MAYFIELD NSW 2304
Jake.Brown@advitech.com.au

Upon registration of interest, information packages with greater detail will be forwarded to you or those you nominate. However, please do not hesitate to contact me should you have any questions about the proposed project and in regard to this letter of invitation,

We would also like to request that you contact us in writing by **Wednesday 27 March, 2019** to indicate the names of any other Aboriginal people that you believe hold cultural knowledge and or who may be interested in being involved in the cultural heritage assessment.

Kind regards,

Yours faithfully,

Jessica Blackman

Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963

13 March, 2019

Nelson Bay National Parks Office
Level 1, 12B Teramby Road,
Nelson Bay NSW 2324
AUSTRALIA

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

Previous assessments at the site have identified the presence of Aboriginal archaeological sites, which require the preparation and submission of an AHIP prior to the proponent being granted development approval. An Aboriginal Cultural Heritage Assessment (ACHA) is also required to assist the applicant in the development of this AHIP; this ACHA will make provisions for test pitting to be conducted over areas of Potential Archaeological Deposits (PADs).

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Should you wish to register your interest in this project, or notify us of other persons who may be interested, please register in writing no later than **Wednesday 27 March, 2019** to:

Jake Brown
Advitech Environmental Pty Ltd
PO Box 207
MAYFIELD NSW 2304
Jake.Brown@advitech.com.au

Upon registration of interest, information packages with greater detail will be forwarded to you or those you nominate. However, please do not hesitate to contact me should you have any questions about the proposed project and in regard to this letter of invitation,

We would also like to request that you contact us in writing by **Wednesday 27 March, 2019** to indicate the names of any other Aboriginal people that you believe hold cultural knowledge and or who may be interested in being involved in the cultural heritage assessment.

Kind regards,

Yours faithfully,

Jessica Blackman

Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963

13 March, 2019

Mid-Coast Council
218 Myall Street,
Tea Gardens NSW 2324
AUSTRALIA

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

Previous assessments at the site have identified the presence of Aboriginal archaeological sites, which require the preparation and submission of an AHIP prior to the proponent being granted development approval. An Aboriginal Cultural Heritage Assessment (ACHA) is also required to assist the applicant in the development of this AHIP; this ACHA will make provisions for test pitting to be conducted over areas of Potential Archaeological Deposits (PADs).

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As per Section 4 of the Aboriginal Cultural Heritage Consultation Requirements for Proponents, you are advised of the following:

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13 March, 2019

Newcastle Environmental Protection Authority
PO Box 488G,
Newcastle NSW 2300
AUSTRALIA

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Jessica Blackman

Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963

13 March, 2019

Karuah Local Aboriginal Lands Council
16 Mustons Road
Karuah NSW 2324
AUSTRALIA

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Archaeologist
Advitech Pty Limited

Job No.: J0YYXXX
Folder No.: F15963



13 March, 2019

Native Title Services Corp
PO Box 2105
Strawberry Hills NSW 2012
AUSTRALIA

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

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Jessica Blackman

Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963

13 March, 2019

The Registrar
National Native Title Tribunal
GPO Box 9973
Sydney NSW 2001
AUSTRALIA

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

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Yours faithfully,

Jessica Blackman

Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963

DOC19
J0190046 F15863

Mr Jake Brown
Advitech Environmental Pty Ltd
Jake.brown@advitech.com.au

Dear Jake

Shearwater Tea Gardens - Stage 1 to Stage 3 North Shearwater Estate – Aboriginal Stakeholder List Mid Coast

In response to your request under Section 4.1.2(a) of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010), please find attached a list of known Aboriginal parties that have self-nominated for Mid Coast Council Local Government Area (LGA). Please note the following information with respect to Aboriginal consultation for your project.

Aboriginal stakeholder lists maintained by OEH are comprised of self-nominated individuals and organisations

Please note that the attached list is comprised only of self-nominated individuals and Aboriginal organisations who could have an interest in your project. The list is not vetted by OEH. As the list comprises only of self-nominated individuals and Aboriginal organisations, it is not necessarily an exhaustive list of all Aboriginal parties who may hold an interest in the project. Further consultation in accordance with step 4.1.2 of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010) is required to identify Aboriginal people who may hold either cultural or historical knowledge relevant to determining the significance of Aboriginal objects or places within your proposed project area.

Aboriginal stakeholder lists may cover multiple Local Aboriginal Land Council boundaries

Please note that the attached list may contain two or more Local Aboriginal Land Councils (LALCs) that occur in the LGA. Please review the boundary of your specific project area and ensure you consult with all LALC(s) that overlap with your project area. OEH does not require you to contact any LALCs on the attached list that you determine are wholly located outside your project area.

Ensure you document the consultation process

Please ensure all consultation undertaken in accordance with the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010) is documented within an Aboriginal Cultural Heritage Assessment Report (ACHAR). This must include copies of all correspondence sent to or received from all Registered Aboriginal Parties (RAPs) throughout the entire consultation process. Omission of these records in the final ACHAR may cause delays in the assessment of an Aboriginal Heritage Impact Permit (AHIP) application or a major project Aboriginal cultural heritage assessment,

and could require parts of the consultation process to be repeated if the evidence provided to OEH does not demonstrate that the consultation process has been conducted in accordance with our consultation requirements.

Demonstrate that reasonable consultation attempts have been made

Please ensure you provide evidence to demonstrate that reasonable attempts have been made to contact the relevant parties identified through step 4.1.2 of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010). If this evidence is not provided, OEH may deem that the consultation process has not complied with the consultation requirements. Similarly, the proponent is required to record all feedback received from RAPs, along with the proponent's response to the feedback. Where concerns or contentious issues are raised by RAPs during the consultation process, OEH expects that reasonable attempts are made to address and resolve these matters, however OEH acknowledges that in some cases, this may not be achievable. In the case where conflict cannot be resolved, it is the responsibility of the proponent to record these differences and provide the necessary information in their ACHAR with their AHIP application or major project ACHAR.

Consultation should not be confused with employment

As outlined in Section 3.4 of the *Aboriginal cultural heritage consultation requirements for proponents* (DECCW 2010), the consultation process involves getting the views of, and information from, Aboriginal people and reporting on these. It is not to be confused with other field assessment processes involved in preparing a proposal and an application. OEH does not have any role with respect to commercial engagement. Where RAPs are engaged commercially to provide field services as part of an assessment process, that is a matter for the proponent to manage as they see fit. However, if a proponent is proposing to undertake consultation processes or elicit cultural information from RAPs during the course of conducting a field survey, OEH considers this to form part of the consultation process and expects that all RAPs would be afforded the opportunity to be involved in the process.

Contacting our office

To ensure we can respond to enquiries promptly, please direct future correspondence to our central mailbox: rog.hcc@environment.nsw.gov.au.

Should you require any further information, please do not hesitate to contact us.

Yours sincerely



GILLIAN GOODE
Archaeologist
Hunter Central Coast Branch
Conservation and Regional Delivery Division

1 April 2019



Attachment A

Hunter Central Coast Branch - Aboriginal Stakeholder List for Mid Coast Council LGA

Please note that this list is valid at the time of sending only and should not be used for subsequent projects.

Organisation	First name	Surname	Address 1	City	State	Post code	Landline	Mobile	Email
A1 Indigenous Services	Carolyn	Hickey	10 Marie Pitt Place	GLENMORE PARK	NSW	2745		0411 650 057	Cazadirect@live.com
Birpai Local Aboriginal Land Council	CEO		14 Aston Street	PORT MACQUARIE	NSW	2444	02 6584 9066		birpailc@midcoast.com.au
Corroboree Aboriginal Corporation	Carroll-Johnson	Marilyn	PO Box 3340	ROUSE HILL	NSW	2155	0288 244 324	0415 911 159	corroboreecorp@bigpond.com
D F T V Enterprises	Derrick	Vale Snr	5 Mountbatten Close	RUTHERFORD	NSW	2320		0438 812 197	deckavale@hotmail.com
Didge Ngunawal Clan	Paul Boyd	& Lilly Carroll	7 Siskin St	QUAKERS HILL	NSW	2763		0426 823 944	didgengunawalclan@yahoo.com.au
Forster Local Aboriginal Land Council	CEO		10 Breckenridge Street	FORSTER	NSW	2428	02 6555 5411		info@forsterlalc.org.au
Hunters & Collectors	Tania	Matthews	U211 Walowa St	NARRABRI	NSW	2390		0409 193 612	Tamatthews10@hotmail.com
Karuah Indigenous Corporation	David	Feeney	1/7 Mustons Rd	KARUAH	NSW	2324	02 4997 5952	0421 114 853	karuahindigenous@outlook.com
Karuah Local Aboriginal Land Council	CEO		16 Muston Road	KARUAH	NSW	2324	02 4997 5733		karuahaboriginal@bigpond.com
Kawul Pty Ltd trading as Wonn1 Sites	Arthur	Fletcher	619 Main Road	GLENDALE	NSW	2285	02 4954 7751	0402 146 193	Wonn1sites@gmail.com
Lakkari NTCG	Mick	Leon	C/- 4/39 Short Street	FORSTER	NSW	2428		0402 751 584	doowakee@gmail.com
Lower Hunter Aboriginal Incorporated	David	Ahoy	5 Killara Drive	CARDIFF SOUTH	NSW	2285		0421 329 520	lowerhunterai@gmail.com

Organisation	First name	Surname	Address 1	City	State	Post code	Landline	Mobile	Email
Murra Bidgee Mullangari Aboriginal Corporation	Ryan Johnson	& Darleen Johnson-Carroll	PO Box 246	SEVEN HILLS	NSW	2147		0497 983 332	murrabidgeemullangari@yahoo.com.au
Mur-Roo-Ma Inc.	Anthony	Anderson	7 Vardon Road	FERN BAY NSW	NSW	2295	02 4928 1910	0402 827 482	murroomainc1@gmail.com
Myland Cultural & Heritage Group	Warren	Schillings	30 Taurus Street	ELERMORE VALE	NSW	2287		0431 392 554	warren@yarnteen.com.au
Nur-Run-Gee Pty Ltd	Leonard	Anderson OAM	22 Popplewell Road	FERN BAY NSW	NSW	2295		0431 334 365	lennie.anderson011@bigpond.com
Purfleet/Taree Local Aboriginal Land Council	CEO		Lots 1-3 Old Pacific Highway	PURFLEET	NSW	2430	02 6552 4106		admin@ptlalc.com.au
Roger Matthews Consultancy	Roger	Matthews	105 View Street	GUNNEDAH	NSW	2380		0455 671 288	
Wattaka Wonnarua CC Service	Des	Hickey	4 Kennedy Street	SINGLETON	NSW	2330	02 6573 3786	0432 977 178	deshickey@bigpond.com
Widescope Indigenous Group	Steven	Hickey	73 Russell Street	EMU PLAINS	NSW	2750		0425 230 693 0425 232 056	Widescope.group@live.com
Yinarr Cultural Services	Kathleen	Steward Kinchela	Lot 5 Westwood Estate	MERRIWA	NSW	2329		0475 436 589	yinarculturalservices@bigpond.com dontminemeay@gmail.com
	Lee	Davison	4 Old Bar Road	OLD BAR	NSW	2430		0450 180 680	leedavison114@yahoo.com.au
	Kevin	Duncan	95 Moala Parade	CHARMHAVEN	NSW	2263	02 4392 9346	0431 224 099	kevin.duncan@bigpond.com

2 April 2019

Wattaka Wonnarua CC Service
4 Kennedy Street
Singleton NSW 2330
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Des,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Kind regards,

Jake Brown
Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Wattaka Wonnarua CC Service Consultation Letter.docx

2 April 2019

Hunters and Collectors
Unit 2
11 Walowa St
Narrabri NSW 2390
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Tania,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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4.1.8 Where an Aboriginal organisation representing Aboriginal people who hold cultural knowledge has registered an interest, a contact person for that organisation must be nominated. Aboriginal cultural knowledge holders who have registered an interest may indicate to the proponent they have appointed a representative to act on their behalf. Where this occurs, the registered Aboriginal party must provide written confirmation and contact details of those individuals to act on their behalf.

Should you wish to register your interest in this project, or notify us of other persons who may be interested, please register in writing no later than **Tuesday 16 April, 2019** to:

Jake Brown
Advitech Environmental Pty Ltd
PO Box 207
MAYFIELD NSW 2304
Jake.Brown@advitech.com.au

Upon registration of interest, information packages with greater detail will be forwarded to you or those you nominate. However, please do not hesitate to contact me should you have any questions about the proposed project and in regard to this letter of invitation,

We would also like to request that you contact us in writing by **Tuesday 16 April, 2019** to indicate the names of any other Aboriginal people that you believe hold cultural knowledge and or who may be interested in being involved in the cultural heritage assessment.

Kind regards,

Jake Brown
Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Hunters and Collectors Consultation Letter.docx

2 April 2019

Lower Hunter Aboriginal Incorporated
5 Killara Drive
Cardiff South NSW 2285
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear David,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

Previous assessments at the site have identified the presence of Aboriginal archaeological sites, which require the preparation and submission of an AHIP prior to the proponent being granted development approval. An Aboriginal Cultural Heritage Assessment (ACHA) is also required to assist the applicant in the development of this AHIP; this ACHA will make provisions for test pitting to be conducted over areas of Potential Archaeological Deposits (PADs).

In accordance with NSW Government guidelines, Aboriginal people and or Aboriginal groups who hold cultural knowledge relevant to determining the significance of Aboriginal objects(s) and or place(s) relating to the proposed project area are invited to register an interest in a process of consultation as outlined in the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010). This is an invitation for Aboriginal people who hold cultural knowledge relevant to the proposed project area and who can determine the significance of Aboriginal object(s) and/or place(s) in this area of the proposed project to register an interest in a process of community consultation.

As per Section 4 of the Aboriginal Cultural Heritage Consultation Requirements for Proponents, you are advised of the following:

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Jake.Brown@advitech.com.au

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Kind regards,

Jake Brown
Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Lower Hunter Aboriginal Incorporated Consultation Letter.docx

2 April 2019

DFTV Enterprises
5 Mountbatten Close
Rutherford NSW 2320
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Derrick,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

Previous assessments at the site have identified the presence of Aboriginal archaeological sites, which require the preparation and submission of an AHIP prior to the proponent being granted development approval. An Aboriginal Cultural Heritage Assessment (ACHA) is also required to assist the applicant in the development of this AHIP; this ACHA will make provisions for test pitting to be conducted over areas of Potential Archaeological Deposits (PADs).

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Advitech Environmental Pty Ltd
PO Box 207
MAYFIELD NSW 2304
Jake.Brown@advitech.com.au

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Kind regards,

Jake Brown

Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: DFTV Enterprises Consultation Letter.docx

2 April 2019

Forster Local Aboriginal Land Council
10 breckenridge Street
Forster NSW 2428
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

Previous assessments at the site have identified the presence of Aboriginal archaeological sites, which require the preparation and submission of an AHIP prior to the proponent being granted development approval. An Aboriginal Cultural Heritage Assessment (ACHA) is also required to assist the applicant in the development of this AHIP; this ACHA will make provisions for test pitting to be conducted over areas of Potential Archaeological Deposits (PADs).

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MAYFIELD NSW 2304
Jake.Brown@advitech.com.au

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Kind regards,

Jake Brown

Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Forster Local Aboriginal Land Council Consultation Letter.docx

2 April 2019

Roger Matthews Consultancy
105 View Street
Gunnedah NSW 2380
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Should you wish to register your interest in this project, or notify us of other persons who may be interested, please register in writing no later than **Tuesday 16 April, 2019** to:

Jake Brown
Advitech Environmental Pty Ltd
PO Box 207
MAYFIELD NSW 2304
Jake.Brown@advitech.com.au

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We would also like to request that you contact us in writing by **Tuesday 16 April, 2019** to indicate the names of any other Aboriginal people that you believe hold cultural knowledge and or who may be interested in being involved in the cultural heritage assessment.

Kind regards,

Jake Brown
Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Roger Matthews Consultancy Consultation Letter.docx

13 March, 2019

Karuah Local Aboriginal Lands Council
16 Mustons Road
Karuah NSW 2324
AUSTRALIA

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

Previous assessments at the site have identified the presence of Aboriginal archaeological sites, which require the preparation and submission of an AHIP prior to the proponent being granted development approval. An Aboriginal Cultural Heritage Assessment (ACHA) is also required to assist the applicant in the development of this AHIP; this ACHA will make provisions for test pitting to be conducted over areas of Potential Archaeological Deposits (PADs).

In accordance with NSW Government guidelines, Aboriginal people and or Aboriginal groups who hold cultural knowledge relevant to determining the significance of Aboriginal objects(s) and or place(s) relating to the proposed project area are invited to register an interest in a process of consultation as outlined in the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010). This is an invitation for Aboriginal people who hold cultural knowledge relevant to the proposed project area and who can determine the significance of Aboriginal object(s) and/or place(s) in this area of the proposed project to register an interest in a process of community consultation.

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Should you wish to register your interest in this project, or notify us of other persons who may be interested, please register in writing no later than **Wednesday 27 March, 2019** to:

Jake Brown
Advitech Environmental Pty Ltd
PO Box 207
MAYFIELD NSW 2304
Jake.Brown@advitech.com.au

Upon registration of interest, information packages with greater detail will be forwarded to you or those you nominate. However, please do not hesitate to contact me should you have any questions about the proposed project and in regard to this letter of invitation,

We would also like to request that you contact us in writing by **Wednesday 27 March** to indicate the names of any other Aboriginal people that you believe hold cultural knowledge and or who may be interested in being involved in the cultural heritage assessment.

Kind regards,

Yours faithfully,

Jessica Blackman

Archaeologist
Advitech Pty Limited

Job No.: J0YYXXX
Folder No.: F15963



2 April 2019

A1 Indigenous Services
10 Marie Pitt Place
Glenmore Park NSW 2745
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Carolyn,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

Previous assessments at the site have identified the presence of Aboriginal archaeological sites, which require the preparation and submission of an AHIP prior to the proponent being granted development approval. An Aboriginal Cultural Heritage Assessment (ACHA) is also required to assist the applicant in the development of this AHIP; this ACHA will make provisions for test pitting to be conducted over areas of Potential Archaeological Deposits (PADs).

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Should you wish to register your interest in this project, or notify us of other persons who may be interested, please register in writing no later than **Tuesday 16 April, 2019** to:

Jake Brown
Advitech Environmental Pty Ltd
PO Box 207
MAYFIELD NSW 2304
Jake.Brown@advitech.com.au

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We would also like to request that you contact us in writing by **Tuesday 16 April, 2019** to indicate the names of any other Aboriginal people that you believe hold cultural knowledge and or who may be interested in being involved in the cultural heritage assessment.

Kind regards,

Jake Brown

Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: A1 Indigenous Services Consultation Letter.docx

2 April 2019

Murra Bidgee Mullangari Aboriginal Corporation
PO Box 246
Seven Hills NSW 2147
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

Previous assessments at the site have identified the presence of Aboriginal archaeological sites, which require the preparation and submission of an AHIP prior to the proponent being granted development approval. An Aboriginal Cultural Heritage Assessment (ACHA) is also required to assist the applicant in the development of this AHIP; this ACHA will make provisions for test pitting to be conducted over areas of Potential Archaeological Deposits (PADs).

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Advitech Environmental Pty Ltd
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MAYFIELD NSW 2304
Jake.Brown@advitech.com.au

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Kind regards,

Jake Brown
Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Murra Bidgee Mullangari Aboriginal Corporation Consultation Letter.docx

2 April 2019

Kawul Pty Ltd
619 Main Road
Glendale NSW 2285
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Arthur,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

Previous assessments at the site have identified the presence of Aboriginal archaeological sites, which require the preparation and submission of an AHIP prior to the proponent being granted development approval. An Aboriginal Cultural Heritage Assessment (ACHA) is also required to assist the applicant in the development of this AHIP; this ACHA will make provisions for test pitting to be conducted over areas of Potential Archaeological Deposits (PADs).

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Advitech Environmental Pty Ltd
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MAYFIELD NSW 2304
Jake.Brown@advitech.com.au

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Kind regards,

Jake Brown

Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Consultation Letter.docx

2 April 2019

Lee Davison
4 Old Bar Road
Old Bar NSW 2430
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Lee,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Jake.Brown@advitech.com.au

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Kind regards,

Jake Brown
Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Lee Davison Consultation Letter.docx

2 April 2019

Lakkari NTCG
c/- 4/39 Short Street
Forster NSW 2428
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Mick,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Should you wish to register your interest in this project, or notify us of other persons who may be interested, please register in writing no later than **Tuesday 16 April, 2019** to:

Jake Brown
Advitech Environmental Pty Ltd
PO Box 207
MAYFIELD NSW 2304
Jake.Brown@advitech.com.au

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Kind regards,

Jake Brown

Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Lakkari NTCG Consultation Letter.docx

2 April 2019

Widescope indigenous Group
73 Russell Street
Emu Plains NSW 2750
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Steven,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Jake Brown

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Job No.: J0190046
Folder No.: F15963
Our Ref: Widescope Indigenous Group Consultation Letter.docx

2 April 2019

Birpai Local Aboriginal Land Council
14 Aston Street
Port Macquarie NSW 2444
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Job No.: J0190046
Folder No.: F15963
Our Ref: Birpai Local Aboriginal Land Council Consultation Letter.docx

2 April 2019

Kevin Duncan
95 Moala Parade
Charmhaven NSW 2263
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Kevin,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Consultation Letter.docx

2 April 2019

Corroboree Aboriginal Corporation
PO Box 3340
Rouse Hill NSW 2155
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Job No.: J0190046
Folder No.: F15963
Our Ref: Corroboree Aboriginal Corporation Consultation Letter.docx

2 April 2019

Forster Local Aboriginal Land Council
Lots 1-3 Old Pacific Highway
Purfleet NSW 2430
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Sir/Madam,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Jake Brown
Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Purfleet Taree Local Aboriginal Land Council Consultation Letter.docx

2 April 2019

Nur-Run-Gee Pty Ltd
22 Popplewell Road
Fern Bay NSW 2295
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Leonard,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Job No.: J0190046
Folder No.: F15963
Our Ref: Nur-Roo-Ma Pty Ltd Consultation Letter.docx

2 April 2019

Mur-Roo-Ma Inc.
7 Vardon Road
Fern Bay NSW 2295
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Anthony,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Job No.: J0190046
Folder No.: F15963
Our Ref: Mur-Roo-Ma Inc. Consultation Letter.docx

2 April 2019

Myland Cultural and Heritage Group
30 Taurus Street
Elmore Vale NSW 2287
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Warren,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Job No.: J0190046
Folder No.: F15963
Our Ref: Myland Cultural and Heritage Group Consultation Letter.docx

2 April 2019

Yinarr Cultural Services
Lot 5 Westwood Estate
Merriwa NSW 2329
Australia

**Subject: Invitation to Aboriginal People to Register Interest
Aboriginal Cultural Heritage Assessment (ACHA) at Shearwater Tea Gardens, Mid
North coast Council**

Dear Kathleen,

We act on behalf of Tattersall Lander Pty Ltd, who is seeking development approval for Stage One to Stage Three of the North Shearwater Estate at Tea Gardens. The Office of Environment and Heritage (OEH) have nominated your organisation as being an Aboriginal organisation or service provider who may have an interest, or know of others with an interest, in the above area.

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Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: Yinarr Cultural Services Consultation Letter.docx

Cultural Heritage Assessment

Registration of Interest for Aboriginal people who hold cultural knowledge

PROJECT: Aboriginal Cultural Heritage Assessment at North Shearwater Estate, Tea Gardens

The purpose of community consultation with Aboriginal people is to assist the proposed applicant in the preparation of an application for an AHIP, if required, and to assist the Director General of the Office of Environment and Heritage (OEH) in his or her consideration and determination of the application. This is an invitation for Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the area of the proposed project to register an interest in a process of community consultation with the proposed applicant regarding the proposed activity. As per the Aboriginal Cultural Heritage Requirements for Proponents (2010), interested parties are advised of the following:

- The proponent must advise Aboriginal people who are registering an interest that their details will be forwarded to OEH and the Local Aboriginal Land council (LALC), unless they specify that they do not want their details released.
- LALCs holding cultural knowledge relevant to determining the significance of Aboriginal objects and places in the proposed project area who wish to register an interest to be involved in consultation must register their interest as an Aboriginal organisation rather than as individuals.
- Where an Aboriginal organisation representing Aboriginal people who hold cultural knowledge has registered an interest, a contact person for that organisation must be nominated. Aboriginal cultural knowledge holders who have registered an interest may indicate to the proponent they have appointed a representative to act on their behalf. Where this occurs, the registered Aboriginal party must provide written confirmation and contact details of those individuals to act on their behalf.

PROPONENT: B.Lander, PO BOX 580 Raymond Terrace NSW 2324

Registration from Aboriginal people and/or Aboriginal groups wishing to be consulted must be received by phone, email or in writing no later than:

Wednesday 27th March 2019

To register your interest, please contact:

**Jake Brown, Archaeologist, Advitech Environmental,
PO Box 207, Mayfield NSW 2304**

E: jake.brown@advitech.com.au or P: 0421 555 894



Jake Brown

From: Caza X <cazadirect@live.com>
Sent: Saturday, 13 April 2019 7:53 PM
To: Jake Brown
Subject: Re: North Shearwater ACHA

A1

Indigenous Services

Contact: Carolyn
M: 0411650057
E: Cazadirect@live.com
A: 10 Marie Pitt Place, Glenmore Park, NSW 2745
ABN: 20 616 970 327

Hi

A1 would like to register for consultation and an field work for this project.

I hold cultural knowledge and connection to this area

Thank you

Carolyn Hickey

From: jake.brown@advitech.com.au <jake.brown@advitech.com.au>
Sent: Tuesday, 2 April 2019 10:32 AM
To: rod.bennison@advitech.com.au
Subject: North Shearwater ACHA

Dear Sir/Madam,

We received your contact details from the Office of Environment and Heritage as a potential interested party for proposed North Shearwater development near Tea Gardens. An Aboriginal Cultural Heritage Assessment is being undertaken. Please find attached a consultation letter with further details.

If you have any further questions or wish to register your interest for the project please don't hesitate to contact me. The last nominated day for registering interest is the **16 April, 2019**.

Regards,

Jake

Jake Brown Archaeologist

jake.brown@advitech.com.au



7 Riverside Drive | Mayfield West | NSW | 2304 | P 02 4924 5400

advitech.com.au

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Jake Brown

From: Admin <admin@ptlalc.com.au>
Sent: Tuesday, 9 April 2019 11:34 AM
To: Jake Brown
Subject: RE: North Shearwater ACHA

Hi Jake

This project is not in our LALC area it's either Forster LALC or Karuah LALC
Thanks

Kelly King

Administration

02 65524106 | www.ptlalc.com.au



From: jake.brown@advitech.com.au [mailto:jake.brown@advitech.com.au]
Sent: Tuesday, 2 April 2019 10:32 AM
To: rod.bennison@advitech.com.au
Subject: North Shearwater ACHA

Dear Sir/Madam,

We received your contact details from the Office of Environment and Heritage as a potential interested party for proposed North Shearwater development near Tea Gardens. An Aboriginal Cultural Heritage Assessment is being undertaken. Please find attached a consultation letter with further details.

If you have any further questions or wish to register your interest for the project please don't hesitate to contact me. The last nominated day for registering interest is the **16 April, 2019**.

Regards,

Jake

Jake Brown Archaeologist
jake.brown@advitech.com.au



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Jake Brown

From: Joedie Lawler <ceo@ptlalc.com.au>
Sent: Tuesday, 9 April 2019 10:30 AM
To: Jake Brown
Cc: ceo@forsterlalc.com.au; ceo@karuahaboriginal.com.au
Subject: decline to register interest.

Hi Jake

Forster LALC and Karuah LAC are the relevant Aboriginal parties you should be consulting with

Kind Regards

Joedie Lawler

Chief Executive Officer
Purfleet Taree Local Aboriginal Lands Council
Ph. 02 65524106 | Mob. 0477020177



Jake Brown

From: Marilyn Carroll-Johnson <corroboreecorp@bigpond.com>
Sent: Wednesday, 3 April 2019 3:59 PM
To: Jake Brown
Cc: Marilyn Carroll-Johnson
Subject: JAKE advitech environmental EOI Shearwater Tea Gardens Mid North coast Council.docx
Attachments: JAKE advitech environmental EOI Shearwater Tea Gardens Mid North coast Council.docx

Hi Jake
Please refer EOI. Thanks.

Kind regards
Marilyn Carroll-Johnson
Director
Corroboree Aboriginal Corporation
Mob: 0415911159
Ph: 0288244324
E: corroboreecorp@bigpond.com
Address: PO Box 3340
ROUSE HILL NSW 2155

Jake Brown

From: Ryan Johnson <ryananthonyjohnson@hotmail.com>
Sent: Wednesday, 3 April 2019 3:32 PM
To: Jake Brown
Subject: North Shearwater ACHA Tea Gardens

Hi Jake,
Please register our corporation for the above project we hold the cultural knowledge relevant to identifying aboriginal objects and or places in the project area.
Kind regards
Shaun Carroll

Sent from [Mail](#) for Windows 10

Jake Brown

From: Ryan Johnson <murrabidgeemullangari@yahoo.com.au>
Sent: Wednesday, 3 April 2019 3:31 PM
To: Jake Brown
Subject: RE: North Shearwater ACHA

Dear Jake,

I would like to register our members and family for the above project, our family holds the cultural knowledge relevant to identifying aboriginal objects and or places in the project area.

Kind regards

Ryan Johnson | **Murra Bidgee Mullangari**
0475565517



Aboriginal Corporation Cultural Heritage

A: PO Box 246, Seven Hills, NSW, 2147
E: murrabidgeemullangari@yahoo.com.au
ICN: 8112

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From: jake.brown@advitech.com.au [mailto:jake.brown@advitech.com.au]
Sent: Tuesday, 2 April 2019 10:32 AM
To: rod.bennison@advitech.com.au
Subject: North Shearwater ACHA

Dear Sir/Madam,

We received your contact details from the Office of Environment and Heritage as a potential interested party for proposed North Shearwater development near Tea Gardens. An Aboriginal Cultural Heritage Assessment is being undertaken. Please find attached a consultation letter with further details.

If you have any further questions or wish to register your interest for the project please don't hesitate to contact me. The last nominated day for registering interest is the **16 April, 2019**.

Regards,

Jake

Jake Brown Archaeologist
jake.brown@advitech.com.au



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advitech.com.au

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Jake Brown

From: lennie.anderson011 lennie.anderson011 <lennie.anderson011@bigpond.com>
Sent: Tuesday, 2 April 2019 4:17 PM
To: Jake Brown
Subject: Re: North Shearwater ACHA

Hi Jake,

I would like to register an interest in the North Shearwater Project and wish to be involved in any further business concerning the Proposal.

Thanking You

Lennie Anderson

----- Original Message -----

From: jake.brown@advitech.com.au
To: rod.bennison@advitech.com.au
Sent: Tuesday, 2 Apr, 2019 At 10:32 AM
Subject: North Shearwater ACHA

Dear Sir/Madam,

We received your contact details from the Office of Environment and Heritage as a potential interested party for proposed North Shearwater development near Tea Gardens. An Aboriginal Cultural Heritage Assessment is being undertaken. Please find attached a consultation letter with further details.

If you have any further questions or wish to register your interest for the project please don't hesitate to contact me. The last nominated day for registering interest is the **16 April, 2019**.

Regards,

Jake

Jake Brown Archaeologist
jake.brown@advitech.com.au



Jake Brown

From: Worimi TOC <worimitoc@hotmail.com>
Sent: Tuesday, 26 March 2019 12:09 PM
To: Jake Brown
Subject: North Shearwater Estate, Tea Gardens

Hi Jake,

On behalf of Worimi Traditional Owners Indigenous Corporation and its members I would like to register my interest in the above mention project.

We do have cultural significance and connection to the land of the area and hold cultural knowledge of the area, this is why it is extremely important to our Worimi people to be consulted and gain the best outcome for protection or preservation of our local sites.

Cheers,

Candy Towers

Worimi Custodian

Worimi Traditional Owners Indigenous Corporation

Ph: 0412 475 362

e: worimitoc@hotmail.com



Guudji Yiigu, I am a Worimi and Yorta Yorta woman from Newcastle NSW, I acknowledge and pay my respects to the traditional owners and custodians of the land on which I live and work, to their continuing connection to land, water, culture and community and pay my respects to the Elders past, present and to our future generations.

30 April 2019

Office of Environment and Heritage
PO Box 1002
Dangar NSW 2309

Attention: To whom it may concern
Subject: Test Excavation Notification

Dear Sir/Madam,

I am writing per the requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* to notify of an upcoming test excavation and sampling strategy

Project Location: The project is located north of Tea Gardens, NSW at the development site of North Shearwater. The site is at lot 1-3 DP 1154170 (map attached)

Client: Tattersall Lander Pty Ltd on behalf of Wolin Pty Ltd

Archaeologist: Jake Brown
Advitech Environmental
7 Riverside Drive
Mayfield West NSW 2304
02 4924 5400
jake.brown@advitech.com.au

Dates of excavation: 27 May 2019 to 31 May 2019

Temporary storage: The temporary storage location will be onsite and marked with GPS. It is proposed to rebury any excavated heritage items until such time an AHIP and permanent storage can be arranged.

The test excavation is a part of an Aboriginal Cultural Heritage Assessment and being undertaken in conjunction with representatives of the local Aboriginal community.

Yours faithfully,

Jake Brown
Archaeologist
Advitech Pty Limited

Job No.: J0190046
Folder No.: F15963
Our Ref: 15963 Letter to OEH EPRG for test excavation.docx

Proposed Assessment

The proposed survey is to further assess the development area with the assistance of the local Aboriginal community. This survey and test excavation aims to supplement the findings of a due diligence survey in 2018 and conduct test excavation. The assessment process will consist of community participation in the field and data gathering about the potential cultural significance of the area. Previous data gathered will be used to assist in targeting specific areas of investigation.

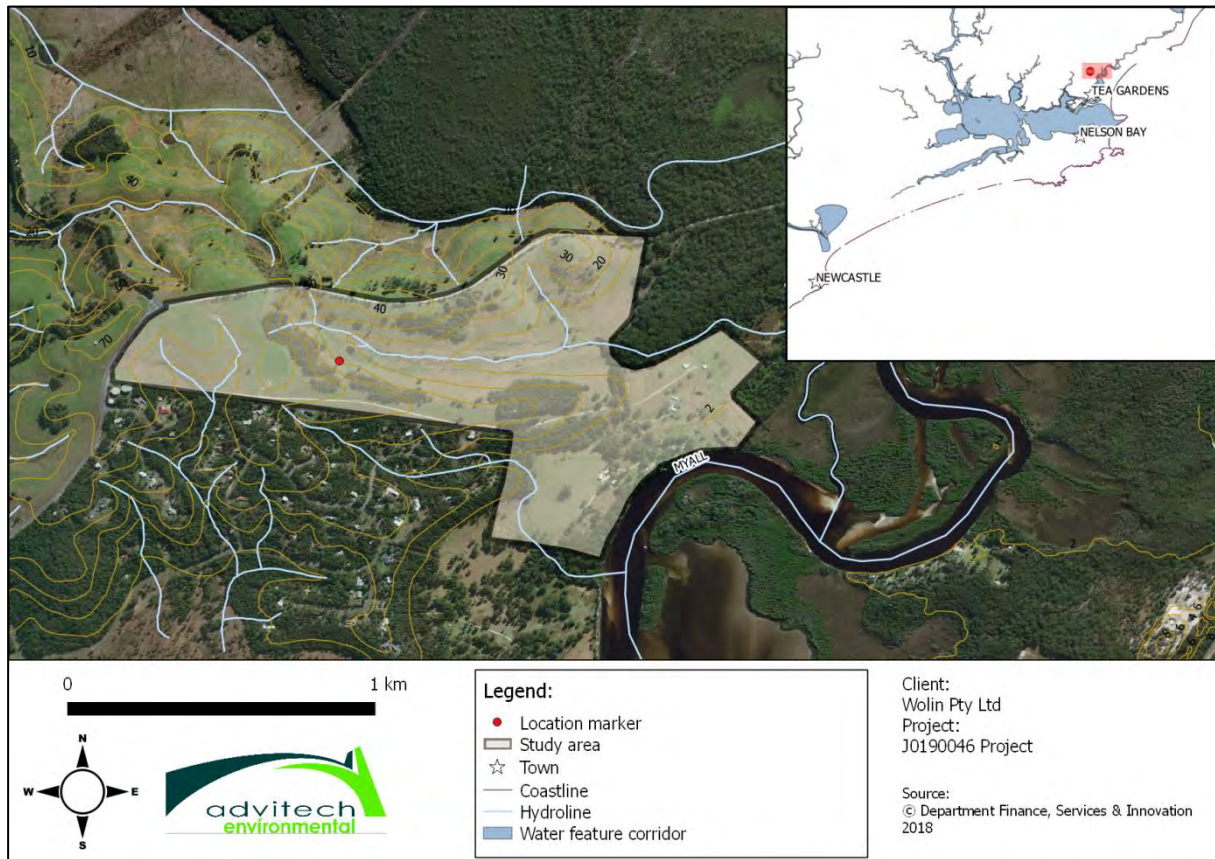


Figure 1: Study area location

The proposed method of field assessment includes a limited pedestrian survey to satisfy and familiarise participants with the area. The pedestrian survey will be conducted with four people, two archaeologists from Advitech and two community members, and will focus on stages 2 and 3 of the development. Transects will be planned with a proposed spacing for each individual to cover 10m (depending on vegetation density). An environmental rehabilitation area exists between the boundary of development stages 1, 2 and 3.

The test excavation will be the predominant assessment method as three archaeological surveys and a geotechnical investigation have previously been undertaken from 2008 to 2018. The previous surveys and community consultation have recommended test surveying to determine the potential cultural heritage impact from the proposed development. A methodology was designed based on previous archaeological and geotechnical reports for the Great Lakes Council (now Mid-Coast Council) by AMBS (2010). The suggested 6 test pits in stage 1 have been adopted and modified from the AMBS (2010) excavation methodology. The proposed 6 test pits will occur along the crest and ridgeline as suggested, however will only cover 250m not 300m; this places one every 50m. The test excavation will be 1m x 1m grids. The current design of the 6 test pits will enable further investigation of the western pad (AHIMS #38-5-0302). The remaining 4 test pits may be undertaken further

evidence is required, as the community consultation with an Aboriginal representative indicated 10 test pits in Stage 1 may be needed. **Table 1** and **Figure 2** contain details of the proposed test areas and staged locations. This will be conducted as per the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* which includes:

- Test excavations must be excavated using hand tools only;
- The first excavation unit must be excavated and documented in 5cm spits at each area being (site) investigated. Based on the evidence of the first excavation unit, 10cm spits or sediment profile/stratigraphic excavation (whichever is smaller) may then be implemented;
- All material excavated from the test excavation units must be sieved using 5mm aperture wire-mesh sieve;
- Test excavation units must be excavated to at least the base of the identified Aboriginal-bearing units, and must continue to confirm the soils below are culturally sterile;
- Photographic and scale-drawn records of the stratigraphy/soil profile, features and information must be made for each single excavation point;
- Test excavation units must be backfilled as soon as possible;
- Following test excavation, an Aboriginal Site Impact Recording form must be completed and submitted to the AHIMS Registrar as soon as practicable, for each AHIMS site that has been subject to test excavation in accordance with the requirements of this Code; and
- Objects revealed during the test excavation will be reburied in a temporary storage location pending long-term management of the salvaged Aboriginal objects. The location and updated site card will be submitted to AHIMS.

The purpose of this assessment is to form part of an Aboriginal Cultural Heritage Assessment and will help to inform an Aboriginal Heritage Impact Permit.

Table 1: Transect start and end points

Name	Latitude	Longitude
1	-32.633396	152.154977
2	-32.633022	152.154723
3	-32.632651	152.154469
4	-32.632277	152.154215
5	-32.631904	152.153961
6	-32.631536	152.153710
7	If warranted	
8	If warranted	
9	If warranted	
10	If warranted	

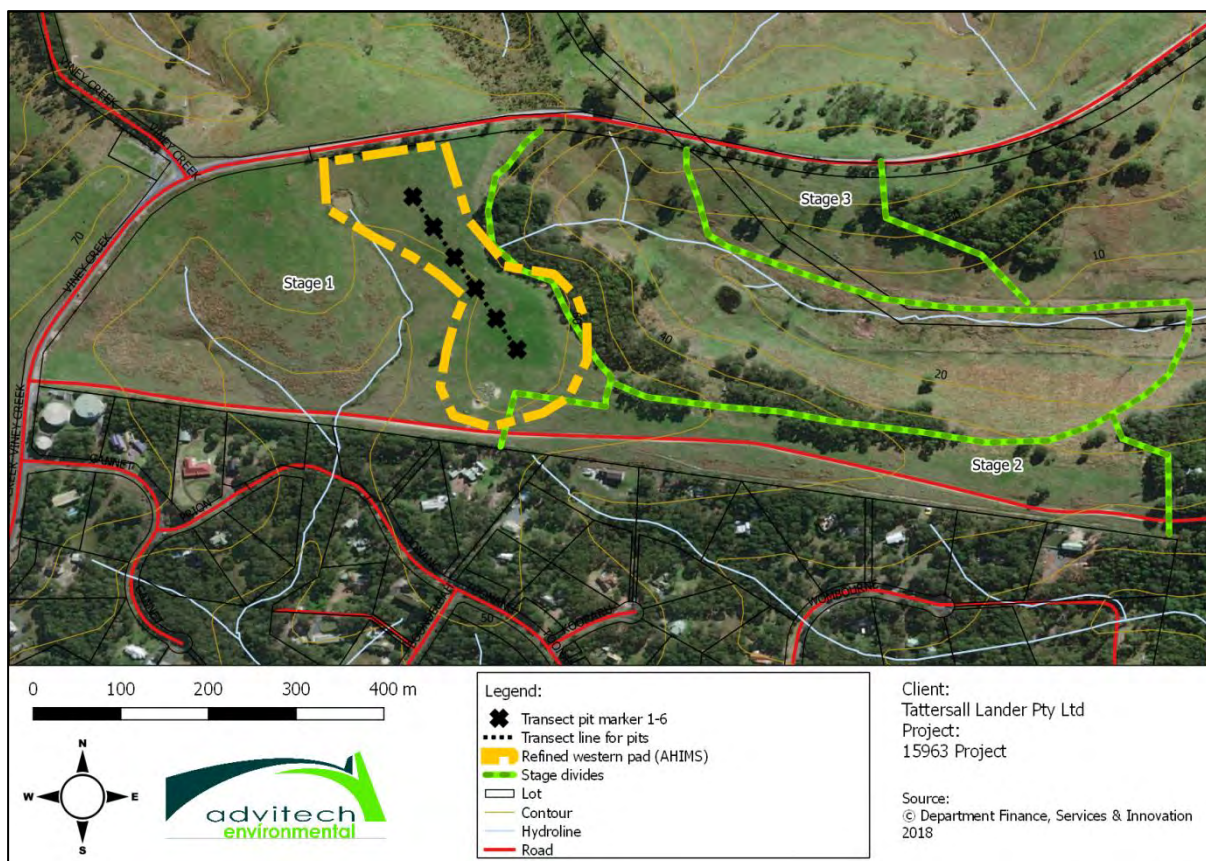


Figure 2: Transects plan map

Wed 17/04/2019 11:57 AM

Jake Brown

Shearwater ACHA Methodology

To Jessica Blackman

Bcc corroboratecorp@bigpond.com; ryananthonyjohnson@hotmail.com; lennie.anderson011@bigpond.com; worimitoc@hotmail.com; Cazadirect@live.com; karuahindigenous@outlook.com; office@karuahaboriginal.com.au



Dear Sir/Madam,

Thank you for registering interest in the North Shearwater development Aboriginal Cultural heritage Assessment. Now that the registration period has been finalised, please find attached the proposed methodology for review and comment. The end of the methodology review period is set for the **17 May, 2019**.

If you have any questions about the project please don't hesitate to make contact

Regards,

Jake

Jake Brown Archaeologist

jake.brown@advitech.com.au



www.advitech.com.au

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Fri 31/05/2019 3:04 PM

Jake Brown

North Shearwater ACHA draft

To Jake Brown

Bcc lennie.anderson011 lennie.anderson011; David Feeney; Cazadirect@live.com; ryananthonyjohnson@hotmail.com; corroboratecorp@bigpond.com; office@karuahaboriginal.com.au; Worimi TOC; lilly carroll; bob@tatland.com.au

This is the most recent version, but you made changes to another copy. Click here to see the other versions.



Dear registered parties,

Please find attached the draft North Shearwater consultation report for your review. The end of the review period is set for midday **28 June, 2019**.

If you have any questions about the project please let me know.

Regards,

Jake

Jake Brown Archaeologist

jake.brown@advitech.com.au



www.advitech.com.au

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Jake Brown

From: Jake Brown
Sent: Monday, 6 January 2020 11:46 AM
Subject: North Shearwater Development Review

Categories: Filed

Dear Registered Parties,

The North Shearwater report has now been reviewed by the Biodiversity Conservation Division (BCD) (previously OEH). Their comments have led to a revised report being drafted. You are now provided an additional 28 day review period to provide feedback. The key areas of concern are machine damaged items. A RAP wished for these items to be registered as cultural items; however, discussion with BCD has supported that the items are not cultural in origin and likely to originate from geotechnical testing between 2009 and 2018. The report provides further details of the reasoning behind this assessment. Hence, the report recommendation is that no further assessment is required for Stages One to Three and the Rehabilitation area of the development.

The link below to the report is via OneDrive. The size of the report is 31 MB. If you have any trouble with the link please let me know.

https://advitechgroup-my.sharepoint.com/:f:/g/personal/jake_brown_advitech_com_au/En8H1wd1mGVBoLOuhd7odooB3sVQwnut2uawP6kL6vFFOQ?e=uRqTCa

The review period is set to end on the **4 February, 2020**.

Thank you for your continued involvement.

Regards,

Jake

Jake Brown Archaeologist
jake.brown@advitech.com.au



www.advitech.com.au

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Jake Brown

From: Jake Brown
Sent: Friday, 24 January 2020 12:01 PM
Subject: Shearwater Review

Categories: Filed

Dear Registered Parties,

As a reminder the review period for the revised Shearwater report is underway. The OneDrive link to the report was sent with the previous email on the 6 January, 2020. The 28 day review period is set to end of **4 February, 2020**.

Regards,

Jake

Jake Brown Archaeologist
jake.brown@advitech.com.au



www.advitech.com.au

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FORMS

Advitech Environmental Pty. Ltd. would like to clearly state that, should you wish to provide feedback in another form, you are encouraged to do so. You are under no obligation to complete the attached forms which are as follows:-

- Registration of Cultural Knowledge Holders
- Cultural Significance
- Comments on proposed methodology

However, should you wish to use this forms, please complete, sign and return to Advitech using one of the following;

Postal address:

Jake Brown
Advitech
P O Box 207
Mayfield NSW 2304

Email: jake.brown@advitech.com.au

Fax: 02 4967 3772



REGISTRATION OF CULTURAL KNOWLEDGE HOLDER

Advitech and the proponent would like to facilitate a process whereby all registered Aboriginal parties are provided the opportunity to contribute to culturally appropriate information gathering, provide information that will enable the cultural significance of Aboriginal sites/places on the project area to be determined, and have input into the development of any cultural heritage management options. To enable this to occur, it is necessary to consult with the cultural knowledge holder(s).

To this end, as per the OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), you are required to provide details of the individual(s) who hold cultural knowledge (according to traditional lore) relevant to the project area. If your group has no knowledge holders, this is important information too.

Please fill in the following information for cultural knowledge holder(s). If there are more than three in your organisation please feel free to attach another sheet. If there is no knowledge holders in your group please send back blank.

Name: Dave Feeney

Address: P.O.Box 24, Karuah NSW 2324

Phone: _____ Mobile: 0421114853

Fax: _____ E-mail: karuahindigenous@outlook.com

Name: David Kirk

Address: 1/4 Mustons Road, Karuah NSW 2324

Phone: _____ Mobile: 0488045682

Fax: _____ E-mail: David.Kirksnr@hotmail.com

Name: _____

Address: _____

Phone: _____ Mobile: _____

Fax: _____ E-mail: _____

CULTURAL SIGNIFICANCE

As per the OEH *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010), the proponent seeks information on the following:

- 1) Are there Aboriginal objects of cultural value in the proposed project area?

YES – We Karuah Indigenous Corporation found a grinding rock and some flacks within the site project area

- 2) Are there Aboriginal places of cultural value to the Aboriginal people in the area of the proposed project? This may include places of social, spiritual and cultural value, historic places with cultural significance, and potential places/areas of historic, social, spiritual and/or cultural significance that may be either pre-contact, post contact or contemporary in age.

I Believe (Dave Feeney) that the whole area is a great place were aboriginal people looked at the sea and a great place for hunting.

- 3) Is there any other cultural information relevant to the proposed project area?

With the project area and close to Tea Gardens we have found many aboriginal items, I believe that more cultural works need doing in the Project area.....

- 4) Advitech and the proponent would like to develop and implement appropriate protocols for sourcing and holding cultural information. Please provide your preferred method of providing detailed information on the above (e.g. written, verbal, this form) and any restrictions you would like to place on your information.

Karuah Indigenous Corporation would like Advitech and the proponent to understand the we would like the Project to go ahead BUT let's do all that we can to say aboriginal cultural has been do and we are happy with the outcome from all parties.....

COMMENTS ON PROPOSED METHODOLOGY

I, Dave Feeney (please insert your name) of **Karuah Indigenous Corporation** (please insert the name of your group), **agrees to the methodology** outlined by Advitech in relation to the proposed assessment at North Shearwater.

Additional comments:

NIL

Signed: 

Date: 24th April 2019

Position within organisation: Snr Cultural Officer & CEO

I, _____ (please insert your name) of _____ (please insert the name of your group), **does not agree to the methodology** outlined by Advitech in relation to the proposed Project at North Shearwater for the following reasons (please explain your reasons for disagreeing):

I would like to suggest the following (please provide your reasoning):

Signed: _____

Date: _____

Position within organisation: _____

Jake Brown

From: Worimi TOC <worimitoc@hotmail.com>
Sent: Friday, 5 July 2019 1:22 AM
To: Jake Brown
Subject: Re: Shearwater

Hi Jake,

I just wanted to apologise about not having comments in by 28th June, our Elder did pass away and we had cultural responsibilities to attend to.

Regards,
Candy

Candy Towers

Worimi Custodian
Worimi Traditional Owners Indigenous Corporation
Ph: 0412 475 362
e: worimitoc@hotmail.com



Guudji Yiigu, I am a Worimi and Yorta Yorta woman from Newcastle NSW, I acknowledge and pay my respects to the traditional owners and custodians of the land on which I live and work, to their continuing connection to land, water, culture and community and pay my respects to the Elders past, present and to our future generations.

From: Jake Brown <Jake.Brown@advitech.com.au>
Sent: Friday, 21 June 2019 3:40 PM
To: Jake Brown
Subject: Shearwater

Dear Registered Party,

Thank you again for registering your interest in the North Shearwater Aboriginal Cultural Heritage Assessment. If you wish to provide comments/feedback to the report sent on the 31 May, the prescribed end date for that reply period is next Friday 28 June.

If you have any questions please let me know.

Regards,

Jake

Jake Brown Archaeologist

jake.brown@advitech.com.au



www.advitech.com.au

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Mon 8/07/2019 10:28 AM

Jake Brown

North Shearwater

To Jake Brown

Bcc lennie.anderson011 lennie.anderson011; David Feeney; Cazadirect@live.com; ryananthonyjohnson@hotmail.com; corroboreecorp@bigpond.com; office@karuahaboriginal.com.au; Worimi TOC; lilly carroll

Dear registered parties,

Regarding the North Shearwater ACHA, my client is moving ahead with the AHIP application and it is suggest to bury the items on site in the environmental buffer. This area will have some earthworks for water retention and replanting of trees, a location is suggested within the current mature trees. Karuah LALC has been contacted and relocation on site is the preferred method from their viewpoint, if you have any comments/opinions or questions about the process please contact me.

Regards,

Jake

Jake Brown Archaeologist

jake.brown@advitech.com.au



www.advitech.com.au

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Jake Brown

From: lennie.anderson011 lennie.anderson011 <lennie.anderson011@bigpond.com>
Sent: Monday, 8 July 2019 6:26 PM
To: Jake Brown
Subject: Re: North Shearwater

Hi Jake,

We do definitely agree with Karuah LALC's methodology as by placing them in the "trees" they maintain 'Spiritual' contact with the insitu area.

Thanking You

Lennie Anderson OAM ASM
Nur-Run-Gee Pty Ltd (Director)

----- Original Message -----

From: "Jake Brown" <Jake.Brown@advitech.com.au>
To: "Jake Brown" <Jake.Brown@advitech.com.au>
Sent: Monday, 8 Jul, 2019 At 10:27 AM
Subject: North Shearwater

Dear registered parties,

Regarding the North Shearwater ACHA, my client is moving ahead with the AHIP application and it is suggest to bury the items on site in the environmental buffer. This area will have some earthworks for water retention and replanting of trees, a location is suggested within the current mature trees. Karuah LALC has been contacted and relocation on site is the preferred method from their viewpoint, if you have any comments/opinions or questions about the process please contact me.

Regards,

Jake

Jake Brown Archaeologist
jake.brown@advitech.com.au



7 Riverside Drive | Mayfield West | NSW | 2304 | PO Box 207 | Mayfield | NSW | 2304 | P 02 4924 5400

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Appendix III

Information Presentation for Community Members

INFORMATION PRESENTATION FOR COMMUNITY MEMBERS

NORTH SHEARWATER DEVELOPMENT

Advitech Environmental (Advitech Pty Limited) has been contracted to conduct an Aboriginal Cultural Heritage Impact Assessment. The assessment may also result in an application for an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974* should any Aboriginal Objects or Places be located within the possible impact area. The North Shearwater development is located 48 km north east of Newcastle and 4 kms north of Tea Gardens.

A due diligence assessment under the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* was conducted in the December, 2018. The resulting survey discovered stone artefacts and the site has 2 PADS which have been registered through the AHIMS system (site card). Further to this discovery, an Aboriginal Cultural Heritage Assessment was recommended and accepted as part of the ongoing Environmental Impact Statement for the quarry expansion. The proposed area is shown in the map below.

The site was previously assessed in 2008 to 2010 with the assistance of the local Aboriginal community.

There are two methods of investigation including the gathering of cultural significance knowledge and archaeological assessment. These are briefly outlined below along with an approximate timeline.

Timeline

Stages	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Stage 1: Consultation	X	X	X	X	X	X	X	X	X	X	X
Stage 2: Survey							X				
Stage 3: Reporting					X	X	X	X			
Stage 4: Finalisation											X

Survey Methodology

The survey methodology will be undertaken the week of **27 May 2019** and will include a refined predictive model, proposed assessment survey and recording procedure.

Refined predictive model

Based on the predictive modelling the refined model for the study area includes:

- A preference for sites within 50 metres of reliable water sources or a confluence of water sources, on ridge lines, spurs and on crests. There is an elevated position located within the study area and hydrolines are present in the study area;

- Previous finds in the area where ground disturbance has occurred and the potential pads indicates a likelihood for subsurface material;
- Sites/artefacts are more likely to be found on landforms with a slope no greater than 30 degrees, except where sandstone bedrock or limestone outcrops are present;
- Higher density of artefacts are likely to occur in stage four (outside the current study area);
- Based on previous surveys the likely majority of finds will be flakes, flaked pieces and debitage; and
- The refined pad area in the current study area (Stage 1) is the most likely spot for subsurface material given the presence of Pleistocene sand and finds within the defined area.

Following on from this, limitations may occur through the assumption of Pleistocene sand meaning a greater chance of yielding artefacts. Limitations may occur when attempting to predict past human actions and behaviour.

Proposed assessment survey

The proposed survey is to further assess the development area with the assistance of the local Aboriginal community. This survey and test excavation aims to supplement the findings of a due diligence survey in 2018. The assessment process will consist of community participation in the field and data gathering about the potential cultural significance of the area. Previous data gathered will be used to assist in targeting specific areas of investigation.

The proposed method of field assessment includes a limited pedestrian survey to satisfy and familiarise participants with the area. The pedestrian survey will be conducted with four people: two archaeologists from Advitech and two community members, and will focus on stages 2 and 3 of the development. Transects will be planned with a proposed spacing for each individual to cover 10m (depending on vegetation density). An environmental rehabilitation area exists between the boundary of development stages 1, 2 and 3.

The test excavation will be the predominant assessment method as three archaeological surveys and a geotechnical investigation have previously been undertaken from 2008 to 2018. The previous surveys and community consultation have recommended test surveying to determine the potential cultural heritage impact from the proposed development. A methodology was designed based on previous archaeological and geotechnical reports for the Great Lakes Council (now Mid-Coast Council) by AMBS (2010). The suggested 6 test pits in stage 1 have been adopted and modified from the AMBS (2010) excavation methodology. The proposed 6 test pits will occur along the crest and ridgeline as suggested, however will only cover 250m not 300m; this places one every 50m. The test excavation will be 1m x 1m grids. The current design of the 6 test pits will enable further investigation of the western pad (AHIMS #38-5-0302). The remaining 4 test pits may be undertaken if further evidence is required, as the community consultation with an Aboriginal representative in 2018 indicated that 10 test pits in Stage 1 may be needed. **Table 1** and **Figure 1** contain details of the proposed test areas and stage locations. This will be conducted as per the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* which includes:

- Test excavations must be excavated using hand tools only;
- The first excavation unit must be excavated and documented in 5cm spits at each area being (site) investigated. Based on the evidence of the first excavation unit, 10cm spits or sediment profile/stratigraphic excavation (whichever is smaller) may then be implemented;

- All material excavated from the test excavation units must be sieved using 5mm aperture wire-mesh sieve;
- Test excavation units must be excavated to at least the base of the identified Aboriginal-bearing units, and must continue to confirm the soils below are culturally sterile;
- Photographic and scale-drawn records of the stratigraphy/soil profile, features and information must be made for each single excavation point;
- Test excavation units must be backfilled as soon as possible;
- Following test excavation, an Aboriginal Site Impact Recording form must be completed and submitted to the AHIMS Registrar as soon as practicable, for each AHIMS site that has been subject to test excavation in accordance with the requirements of this Code; and
- Objects revealed during the test excavation will be reburied in a temporary storage location pending long-term management of the salvaged Aboriginal objects. The location and updated site card will be submitted to AHIMS.

The purpose of this assessment is to form part of an Aboriginal Cultural Heritage Assessment and will help to inform an Aboriginal Heritage Impact Permit.

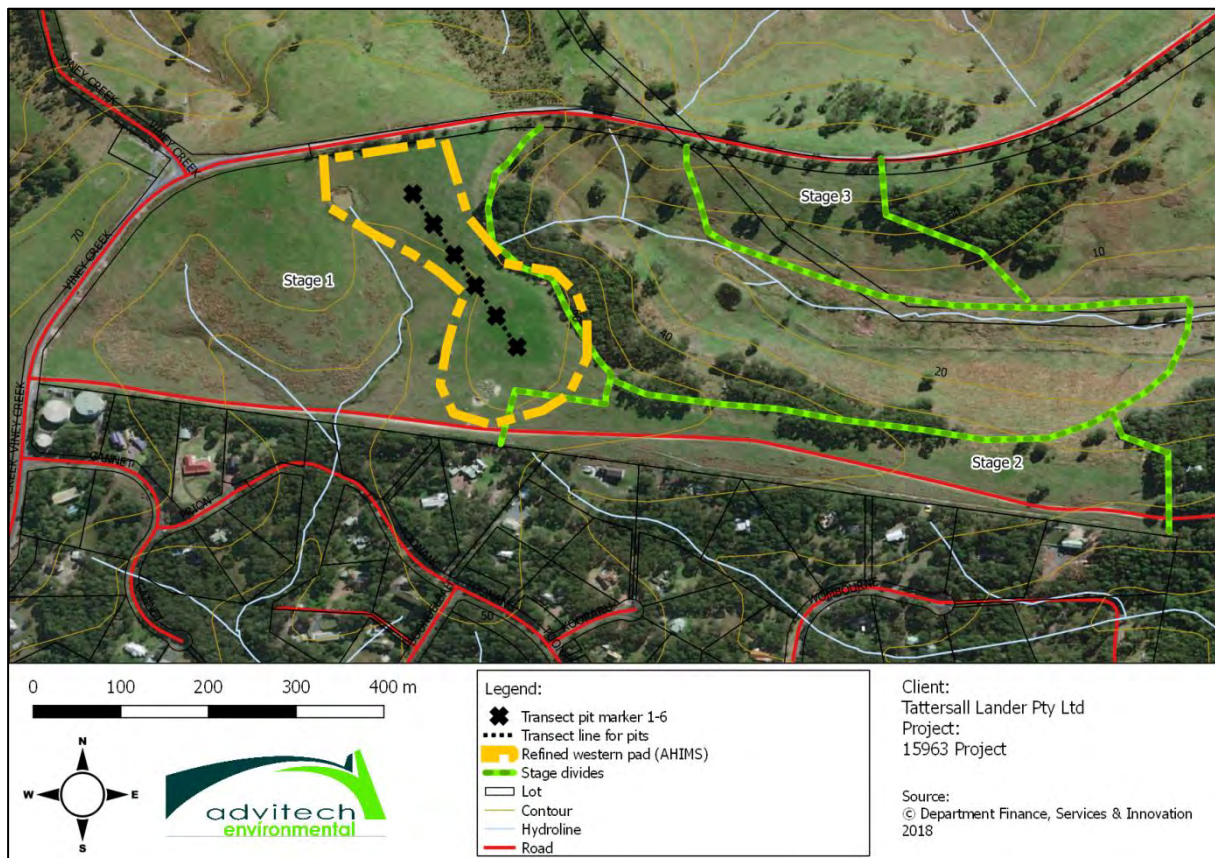


Figure 18: Test pit plan map

Table 1: Test pit location points

Name	Latitude	Longitude
1	-32.633396	152.154977
2	-32.633022	152.154723
3	-32.632651	152.154469
4	-32.632277	152.154215
5	-32.631904	152.153961
6	-32.631536	152.153710
7	If warranted	
8	If warranted	
9	If warranted	
10	If warranted	

Table 10: Examples of recording

Item	Recording Action
Isolated Artefact/s (up to 5 within 1m ²)	- Photos of multiple sides with scale card (e.g. flake ventral and dorsal) - GPS location - Field notes including measurements, material and artefact type
Open Scatter (5+ artefacts within 1m ²)	- Photos of individual artefacts, extent of scatter - GPS location - Field notes including measurements, number of artefacts, material and artefact type
Scar tree	- Photos of scar and tree - GPS location - Field notes including measurements, species, direction and condition of scar/s
Stone arrangement	- Photos of individual stones and pattern - GPS location - Sketch of pattern - Field notes including type and size of stone

Consultation

- Consultation with registered Aboriginal parties involves obtaining the views of, and information from, Aboriginal parties and reporting on these. It should not be confused with other field assessment processes involved in preparing a proposal and an application;
- Consultation does not include the employment of Aboriginal people to assist in field assessment and/or site monitoring; and
- The proponent is not obliged to employ those Aboriginal people registered for consultation. Consultation as per these requirements will continue irrespective of potential or actual employment opportunities (i.e. pay disputes) for Aboriginal people.

Forms

You will find a number of forms attached for your convenience. However, you are most welcome to provide the information required in any form that you would like. Please ensure that answers to all the questions are returned to Advitech Environmental no later than **17 May, 2019**.

Forms attached:

- Register of cultural knowledge holder;
- Cultural significance; and
- Comments on proposed methodology.

Advitech would welcome community feedback and any additional cultural information that could help inform the assessment process including the survey methodology and potential AHIP application.

Thank you for your cooperation in this process,

Please contact Jake Brown either via email or phone (details below) no later than **17 May, 2019**.

Regards,

Jake Brown

Email - jake.brown@advitech.com.au

Phone - 02 4924 5400

FORMS

Advitech Environmental Pty. Ltd. would like to clearly state that, should you wish to provide feedback in another form, you are encouraged to do so. You are under no obligation to complete the attached forms which are as follows:-

- Registration of Cultural Knowledge Holders
- Cultural Significance
- Comments on proposed methodology

However, should you wish to use this forms, please complete, sign and return to Advitech using one of the following;

Postal address:

Jake Brown
Advitech
P O Box 207
Mayfield NSW 2304

Email: jake.brown@advitech.com.au

Fax: 02 4967 3772

REGISTRATION OF CULTURAL KNOWLEDGE HOLDER

Advitech and the proponent would like to facilitate a process whereby all registered Aboriginal parties are provided the opportunity to contribute to culturally appropriate information gathering, provide information that will enable the cultural significance of Aboriginal sites/places on the project area to be determined, and have input into the development of any cultural heritage management options. To enable this to occur, it is necessary to consult with the cultural knowledge holder(s).

To this end, as per the DPIE Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010), you are required to provide details of the individual(s) who hold cultural knowledge (according to traditional lore) relevant to the project area. If your group has no knowledge holders, this is important information too.

Please fill in the following information for cultural knowledge holder(s). If there are more than three in your organisation please feel free to attach another sheet. If there are no knowledge holders in your group please send back blank.

Name: _____

Address: _____

Phone: _____ Mobile: _____

Fax: _____ E-mail: _____

Name: _____

Address: _____

Phone: _____ Mobile: _____

Fax: _____ E-mail: _____

Name: _____

Address: _____

Phone: _____ Mobile: _____

Fax: _____ E-mail: _____

CULTURAL SIGNIFICANCE

As per the DPIE *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010), the proponent seeks information on the following:

- 1) Are there Aboriginal objects of cultural value in the proposed project area?

- 2) Are there Aboriginal places of cultural value to the Aboriginal people in the area of the proposed project? This may include places of social, spiritual and cultural value, historic places with cultural significance, and potential places/areas of historic, social, spiritual and/or cultural significance that may be either pre-contact, post contact or contemporary in age.

- 3) Is there any other cultural information relevant to the proposed project area?

- 4) Advitech and the proponent would like to develop and implement appropriate protocols for sourcing and holding cultural information. Please provide your preferred method of providing detailed information on the above (e.g. written, verbal, this form) and any restrictions you would like to place on your information.

COMMENTS ON PROPOSED METHODOLOGY

I, _____ (*please insert your name*) of _____ (*please insert the name of your group*), **agrees to the methodology** outlined by Advitech in relation to the proposed assessment at North Shearwater.

Additional comments:

Signed: _____ Date: _____

Position within organisation: _____

I, _____ (*please insert your name*) of _____ (*please insert the name of your group*), **does not agree to the methodology** outlined by Advitech in relation to the proposed Project at North Shearwater for the following reasons (*please explain your reasons for disagreeing*):

I would like to suggest the following (please provide your reasoning): _____

Signed: _____ Date: _____

Position within organisation: _____



Appendix IV

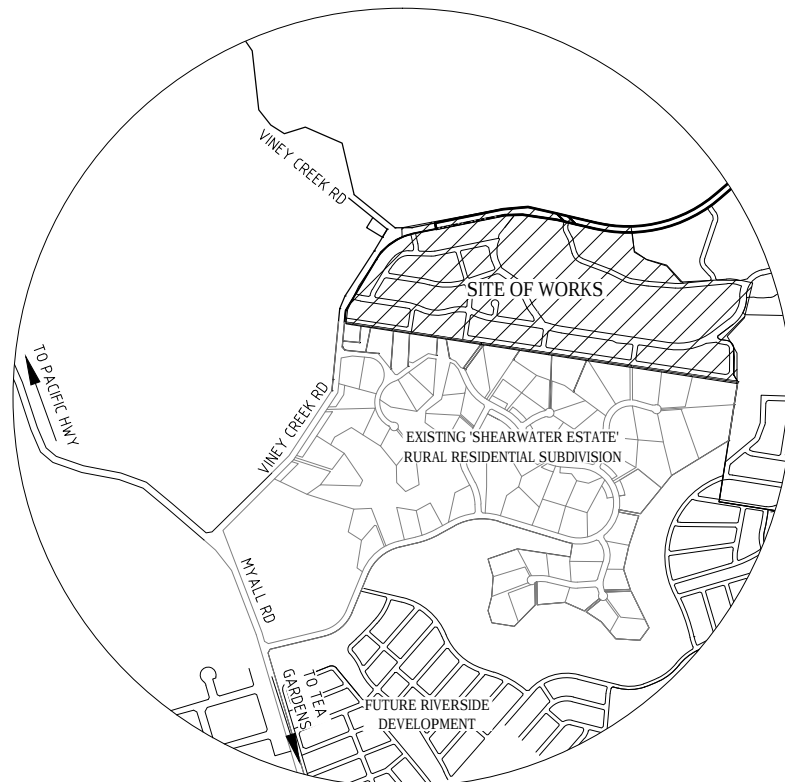
Development Plans for North Shearwater

PROPOSED RESIDENTIAL SUBDIVISION

'DURNNESS STATION', LOT 2, 3 & 4 DP 1154170

VINEY CREEK ROAD, NORTH SHEARWATER

DEVELOPMENT APPLICATION, ROAD & DRAINAGE DESIGN PLANS



LOCALITY SKETCH

Schedule of Drawings			
Sheet	File Number	Description	Revision
1	21800037	COVER SHEET, LOCALITY SKETCH & SCHEDULE OF DRAWINGS	A
2	21800038	OVERALL SITE PLAN	A
3	21800039	STAGE 1 SUBDIVISION LAYOUT	A
4	21800040	STAGE 2 & 3 SUBDIVISION LAYOUT	A
5	21800041	STAGE 1 DETAIL PLAN	A
6	21800042	STAGE 2 & 3 DETAIL PLAN	A
7	21800043	RU2 RECREATIONAL AREA DETAIL PLAN	A
8	21800044	STAGE 1 TREE REMOVAL PLAN	A
9	21800045	STAGE 2 & 3 TREE REMOVAL PLAN	A
10	21800046	STAGE 1 PRECINCT RELEASE PLAN	A
11	21800047	DETAILS PLAN - ROAD TYPICALS	A
12	21800048	DETAILS PLAN - SERVICES ALLOCATIONS & VINEY CREEK RD LANDSCAPE BUFFER	A
13	21800049	ROAD LONGITUDINAL SECTIONS	A
14	21800050	ROAD LONGITUDINAL SECTIONS	A
15	21800051	ROAD LONGITUDINAL SECTIONS	A
16	21800052	ROAD LONGITUDINAL SECTIONS	A
17	21800053	ROAD LONGITUDINAL SECTIONS	A
18	21800054	RIPARIAN CORRIDOR PATHWAY & STG 2-5 SERVICE ROAD LONGITUDINAL SECTIONS	A
19	21800055	STAGE 1 BASIN PLAN	A
20	21800056	STAGE 1 BASIN SECTIONS	A
21	21800057	STAGE 1 BASIN DETAILS	A
22	21800058	STAGE 2 BASIN PLAN	A
23	21800059	STAGE 3 BASIN PLAN	A
24	21800060	STAGE 3 BASIN SECTIONS	A
25	21800061	CATCHMENT PLAN	A
26	21800062	STAGE 1 CUT-FILL PLAN	A
27	21800063	STAGE 2 & 3 CUT-FILL PLAN	A
28	21800064	OVERALL SHARED PATHWAYS PLAN	A
29	21800065	STAGE 1 CONCEPT SOIL & WATER MANAGEMENT PLAN	A
30	21800066	STAGE 2 & 3 CONCEPT SOIL & WATER MANAGEMENT PLAN	A
31	21800067	CONCEPT SOIL & WATER MANAGEMENT NOTES	A
32	21800068	OVERALL CONCEPT ELECTRICAL SERVICING PLAN	A

Designed By

TATTERSALL LANDER PTY LTD
DEVELOPMENT CONSULTANTS IN ENGINEERING, SURVEYING & PLANNING
PO Box 580 RAYMOND TERRACE Phone (02) 4987 1500





A	Original Issue		AV	AV	CG*	BL*	18/4/18	
REV	DETAILS OF AMENDMENT		DESIGNED	DRAWN	CHECKED	APPROVED	DATE	

* Denote the original signature and date when revision was issued

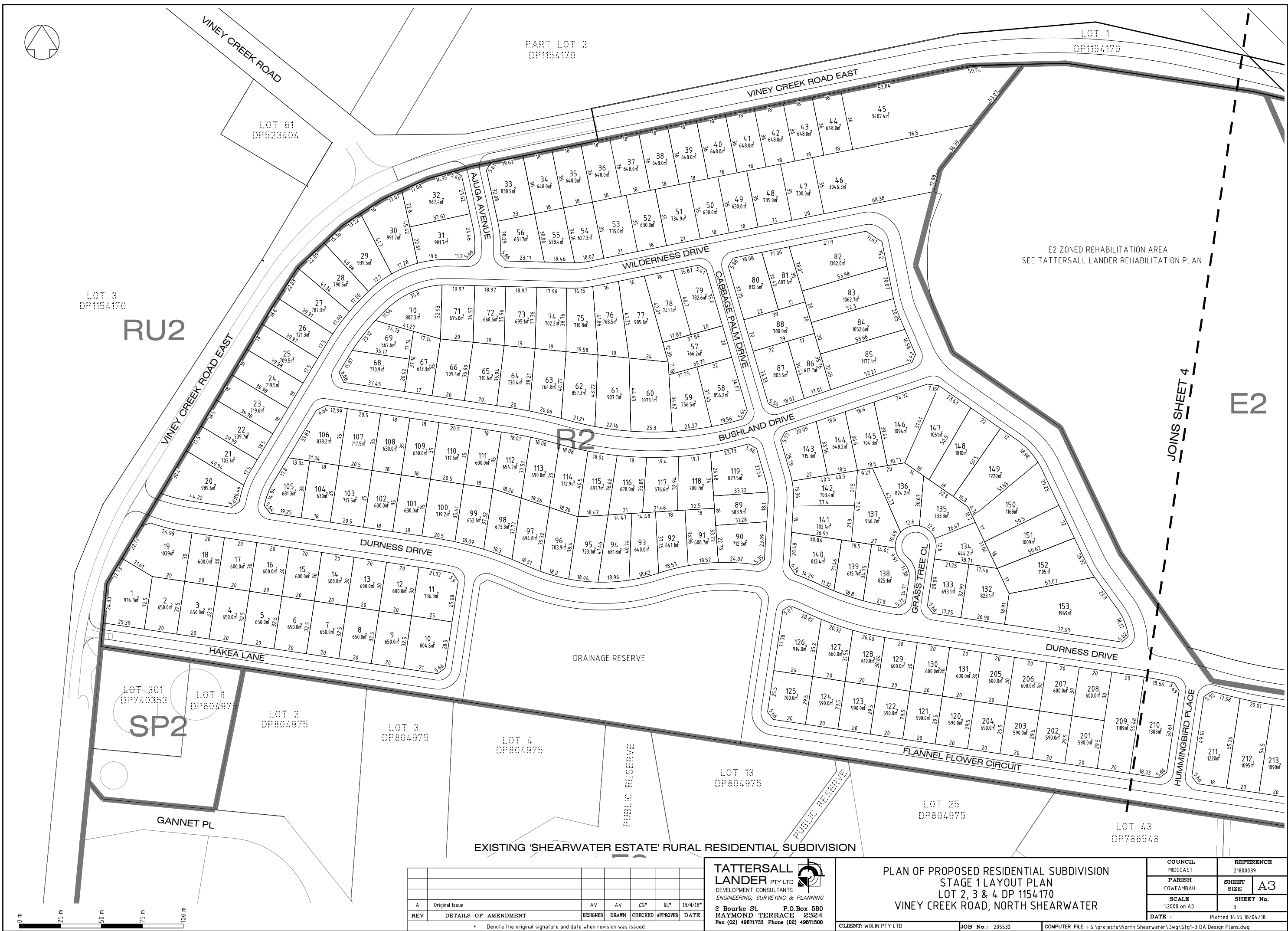
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ENGINEERING, SURVEYING & PLANNING

2 Bourke St. P.O.Box 580
RAYMOND TERRACE 2324
Fax (02) 49871733 Phone (02) 49871500

OVERALL SITE PLAN
DURNESSE STATION RESIDENTIAL SUBDIVISION
LOT 2, 3 & 4 DP 1154170
VINEY CREEK ROAD, NORTH SHEARWATER

COUNCIL MIDCOAST	REFERENCE 21800038	
PARISH COWEAMBAH	SHEET SIZE	A3
SCALE 1:600 on A3	SHEET No. 2	
DATE : 14 Dec 06 Plotted 14-06-18/04/18		

CLIENT: WOLIN PTY LTD	JOB No.: 205532	COMPUTER FILE : S:\projects\North Shearwater\DWg\Stg1-3 DA Design Plans.dwg
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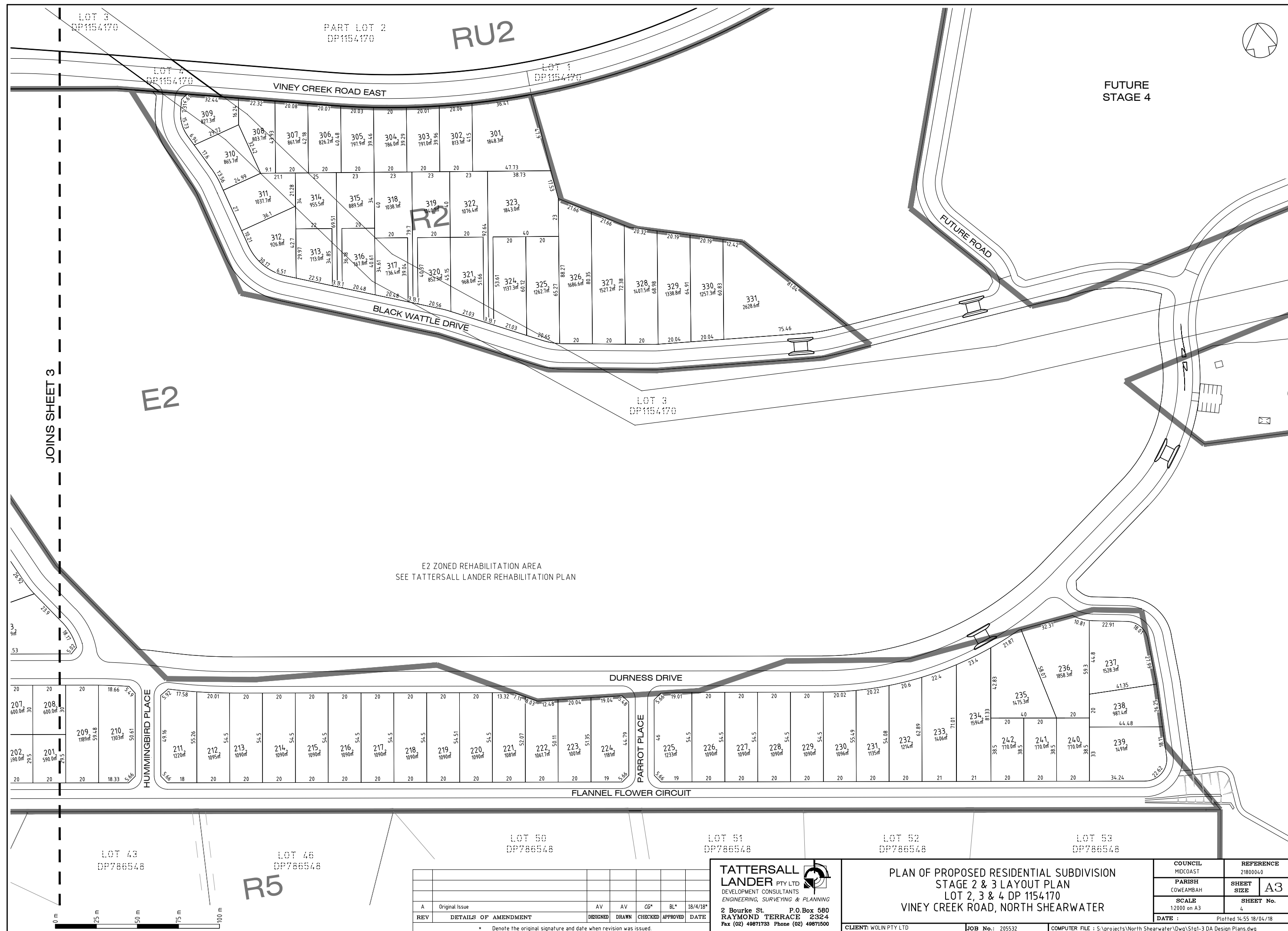
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**PLAN OF PROPOSED RESIDENTIAL SUBDIVISION
STAGE 1 LAYOUT PLAN
LOT 2, 3 & 4 DP 1154170
VINE CREEK ROAD, NORTH SHEARWATER**

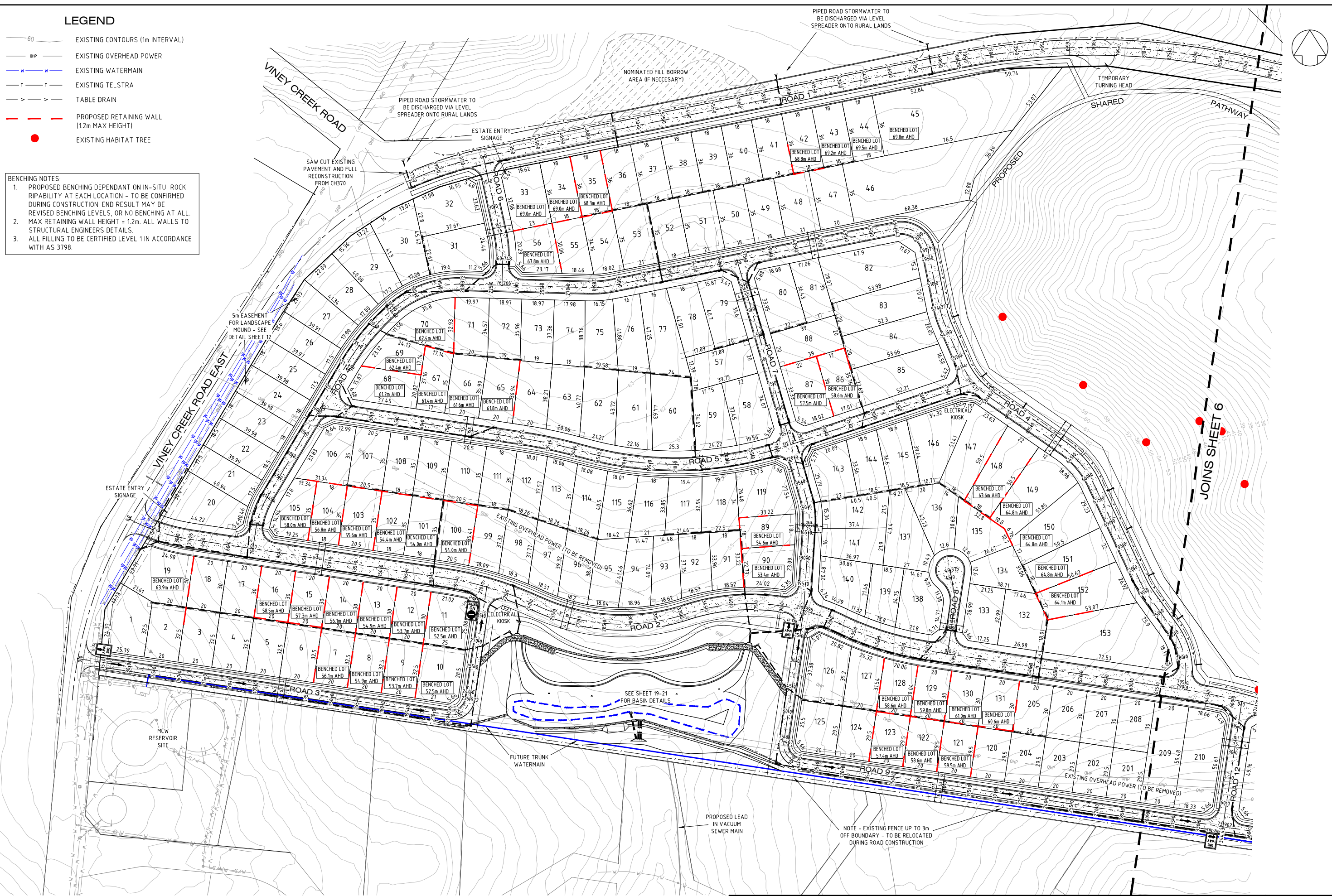
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PARISH COWEAMBAH	SHEET SIZE A3
SCALE 1:2000 on A3	SHEET No. 3
DATE : Plotted 14/55 18/04/18	

CLIENT: WOLIN PTY LTD JOB No.: 205532 COMPUTER FILE : S:\projects\North Shearwater\DWG\S1g1-3 DA Design Plans.dwg



	EXISTING CONTOURS (1m INTERVAL)
	EXISTING OVERHEAD POWER
	EXISTING WATERMAIN
	EXISTING TELSTRA
	TABLE DRAIN
	PROPOSED RETAINING WALL
	(1.2m MAX HEIGHT)
	EXISTING HABITAT TREE

BENCHING NOTES:	1. PROPOSED BENCHING DEPENDANT ON IN-SITU ROCK RIPABILITY AT EACH LOCATION - TO BE CONFIRMED DURING CONSTRUCTION. END RESULT MAY BE REVISED BENCHING LEVELS, OR NO BENCHING AT ALL. 2. MAX RETAINING WALL HEIGHT = 1.2m. ALL WALLS TO STRUCTURAL ENGINEERS DETAILS. 3. ALL FILLING TO BE CERTIFIED LEVEL 1 IN ACCORDANCE WITH AS 3798.
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(A) - PROP. EASEMENT FOR DRAINAGE OF SEWAGE (3' WIDE & VARIABLE)
(B) - PROP. EASEMENT FOR DRAINAGE OF WATER (1' WIDE)

A	Original Issue		AV	AV	CG*	BL*		18/4/18*	
REV	DETAILS OF AMENDMENT		DESIGNED	DRAWN	CHECKED	APPROVED		DATE	

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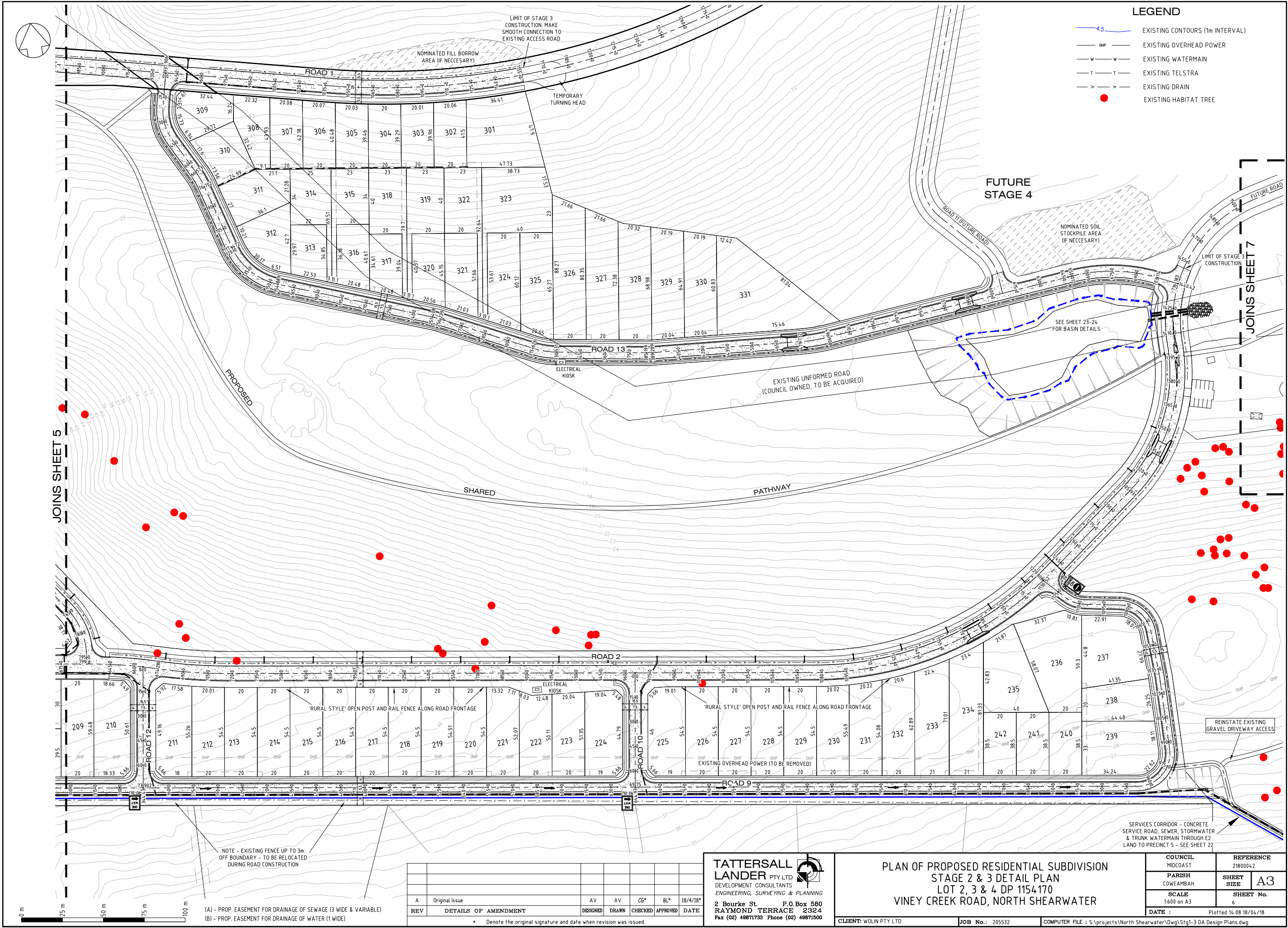
PLAN OF PROPOSED RESIDENTIAL SUBDIVISION
STAGE 1 DETAIL PLAN
LOT 2, 3 & 4 DP 1154170
VINEY CREEK ROAD, NORTH SHEARWATER

CLIENT: WOLIN PTY LTD

JOB No.: 205532

COMPUTER FILE : S:\projects\North Shearwater\Dwg\Std1-3 DA Design Plans.dwg

COUNCIL MIDCOAST	REFERENCE 21800041	
PARISH COWEAMBAH	SHEET SIZE	A3
SCALE 1:2000 on A3	SHEET No. 5	
DATE : Plotted 14/08/18/04/18		



LEGEND

- 4.5 EXISTING CONTOURS (1m INTERVAL)
- OHP EXISTING OVERHEAD POWER
- W EXISTING WATERMAIN
- T EXISTING TELSTRA
- > EXISTING DRAIN
- EXISTING HABITAT TREE

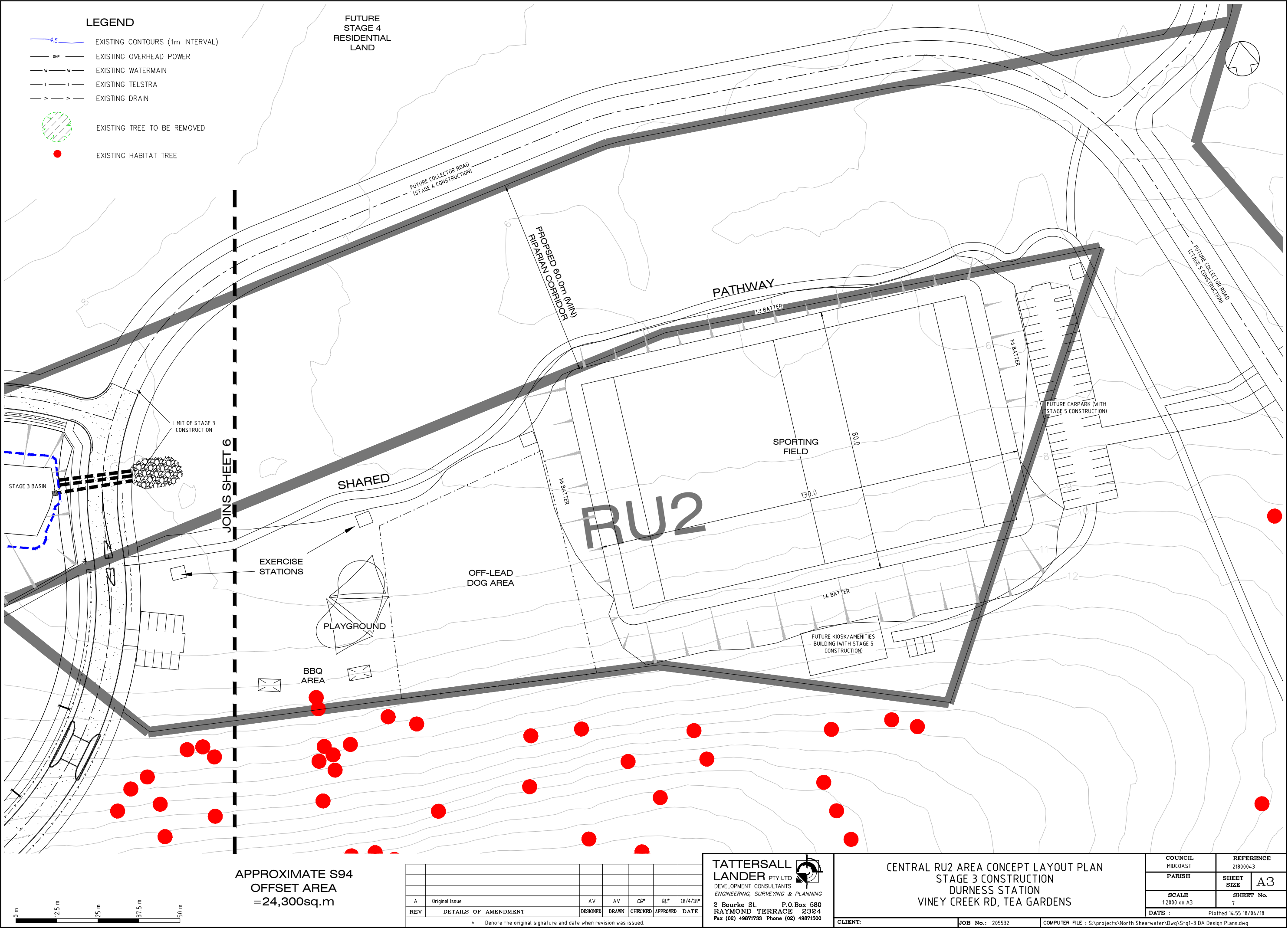
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Fax (02) 49871733 Phone (02) 49871500

PLAN OF PROPOSED RESIDENTIAL SUBDIVISION
STAGE 2 & 3 DETAIL PLAN
LOT 2, 3 & 4 DP 1154170
VINEY CREEK ROAD, NORTH SHEARWATER

COUNCIL MIDCOAST	REFERENCE 21800042
PARISH COWEAMBAH	SHEET SIZE A3
SCALE 1:600 on A3	SHEET No. 6
DATE : 14/08/18	Plotted 14/08/18/04/18

Original Issue	AV	AV	CG*	BL*	18/4/18*
DETAILS OF AMENDMENT	DESIGNED	DRAWN	CHECKED	APPROVED	DATE

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LEGEND

- 4.5 EXISTING CONTOURS (1m INTERVAL)
- OH^P EXISTING OVERHEAD POWER
- W EXISTING WATERMAIN
- T EXISTING TELSTRA
- > EXISTING DRAIN
- EXISTING TREE TO BE REMOVED
- EXISTING HABITAT TREE

FUTURE
STAGE 4
RESIDENTIAL
LAND

FUTURE COLLECTOR ROAD
(STAGE 4 CONSTRUCTION)

PROPOSED 60.0m (MIN)
RIPARIAN CORRIDOR

PATHWAY

1:3 BATTER

1:6 BATTER

FUTURE CARPARK (WITH
STAGE 5 CONSTRUCTION)

FUTURE COLLECTOR ROAD
(STAGE 5 CONSTRUCTION)

LIMIT OF STAGE 3
CONSTRUCTION

STAGE 3 BASIN

JOINS SHEET 6

SHARED

EXERCISE
STATIONS

PLAYGROUND

OFF-LEAD
DOG AREA

BBQ
AREA

RU2

SPORTING
FIELD

1:4 BATTER

FUTURE KIOSK/AMENITIES
BUILDING (WITH STAGE 5
CONSTRUCTION)

APPROXIMATE S94
OFFSET AREA
=24,300sq.m

REV	DETAILS OF AMENDMENT	DESIGNED	DRAWN	CHECKED	APPROVED	DATE
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Fax (02) 49871733 Phone (02) 49871500

CENTRAL RU2 AREA CONCEPT LAYOUT PLAN
STAGE 3 CONSTRUCTION
DURNESSE STATION
VINEY CREEK RD, TEA GARDENS

CLIENT: JOB No.: 205532 COMPUTER FILE : S:\projects\North Shearwater\DWG\S1g1-3 DA Design Plans.dwg

COUNCIL MIDCOAST	REFERENCE 21800043
PARISH	SHEET SIZE A3
SCALE 1:2000 on A3	SHEET No. 7
DATE :	Plotted 14/55 18/04/18

EXISTING HABITAT TREE



VINEY CREEK ROAD

JOINS SHEET 9

A	Original Issue	AV	AV	CG*	BL*	18/4/	
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18* TATTERSALL
RE LANDER Pty Ltd
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	SCALE
	1:2000
	COMPL

SCALE :  1:2000 for A3 sized plot
COMPUTER FILE : S:\proj

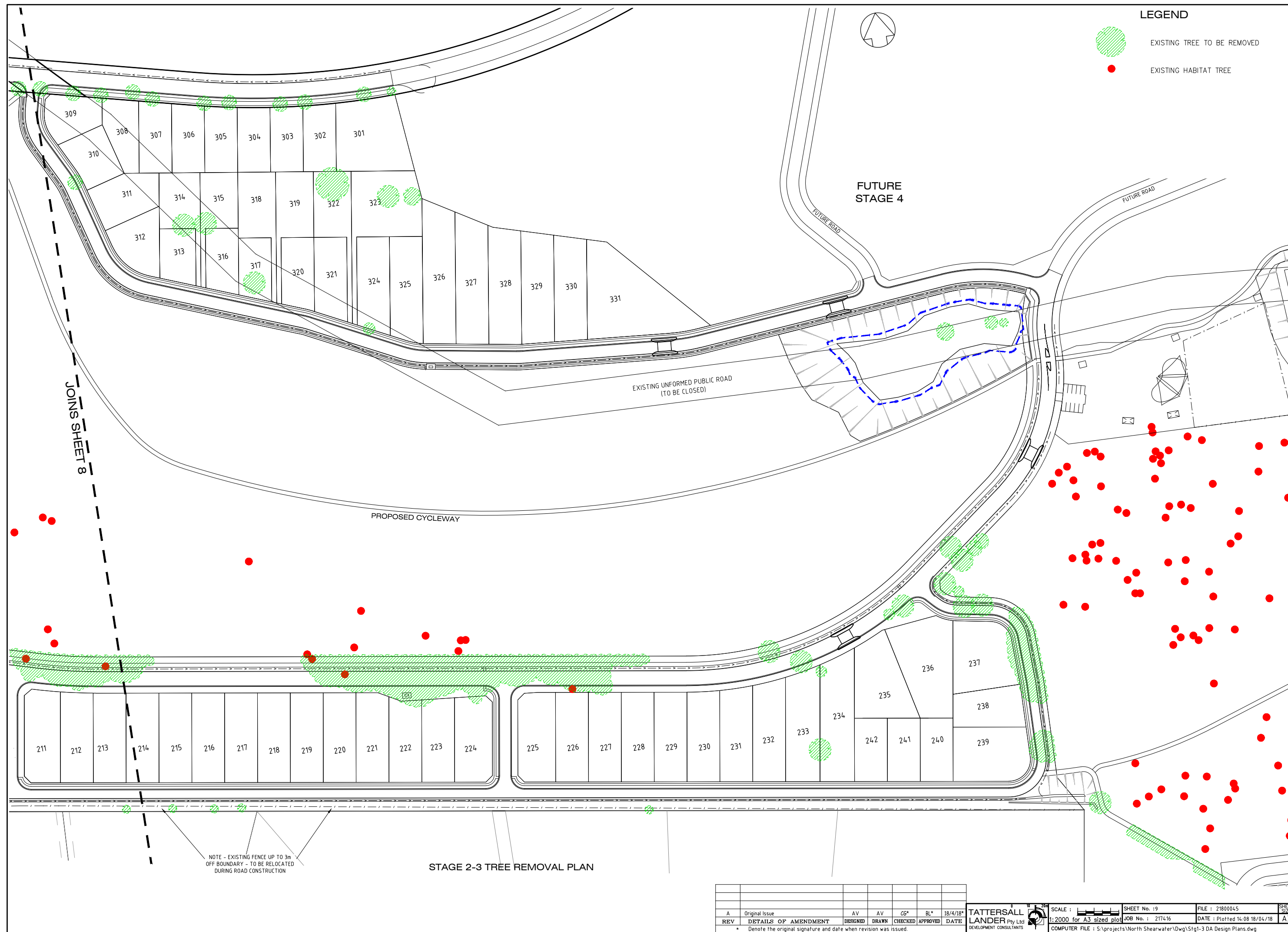
SHEET No. :8
JOB No. : 21

FILE : 21800044
DATE : Plotted 1

Std1_3.DA Design BL

	SHE SIZ
8	A

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1:2000 for A3 sized plot	JOB No. : 217416	DATE : Plotted 14/08 18/04/1
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- PRECINCT 1A

39 LOTS
- PRECINCT 1B

28 LOTS
- PRECINCT 1C

28 LOTS
- PRECINCT 1D

31 LOTS
- PRECINCT 1E

27 LOTS
- 153 LOTS



REV	DETAILS OF AMENDMENT	DESIGNED	DRAWN	CHECKED	APPROVED	DATE
A	Original Issue	AV	AV	CG*	BL*	18/4/18*

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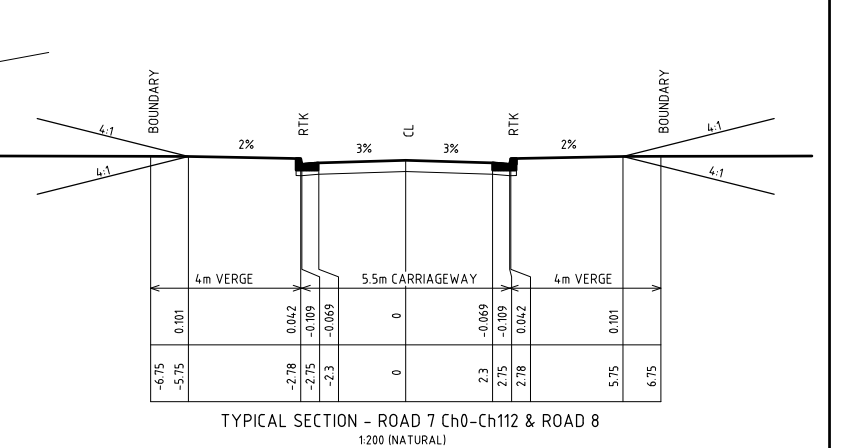
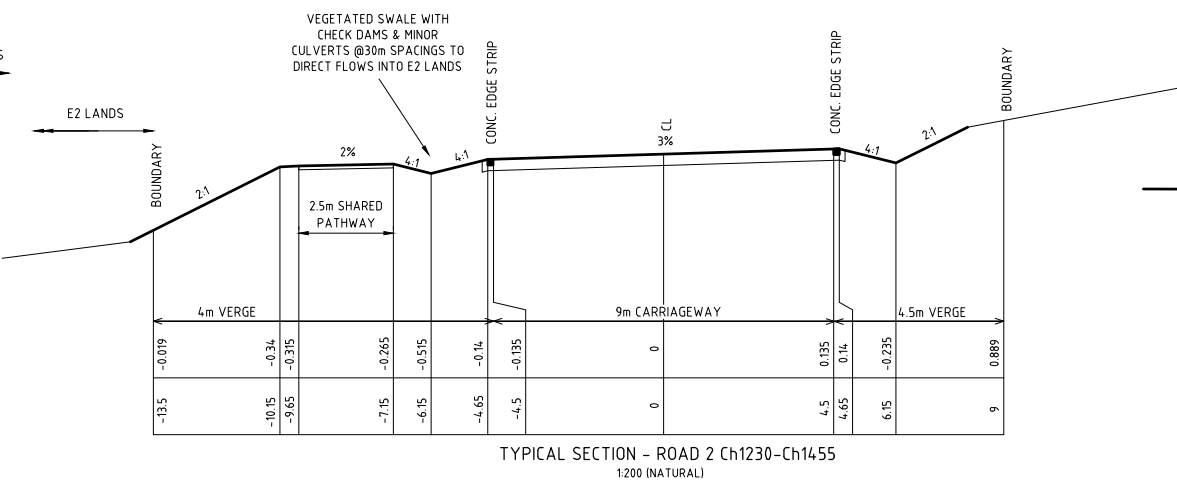
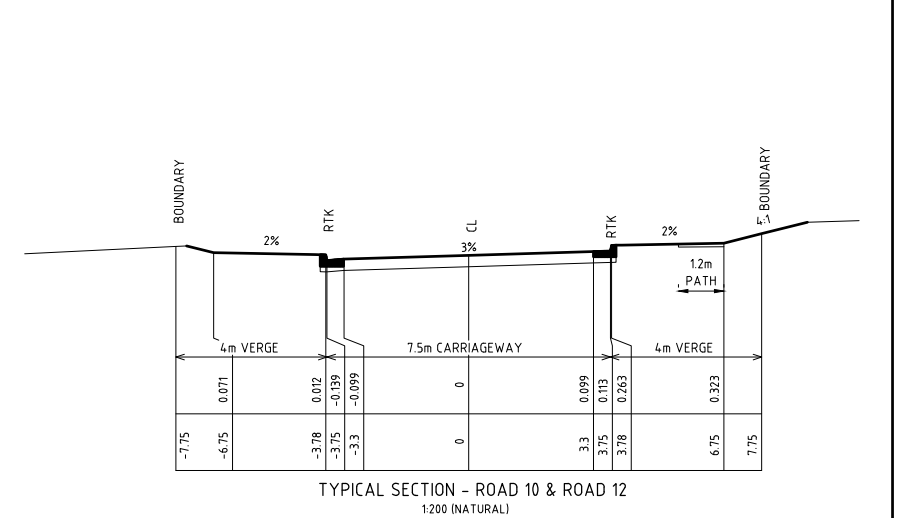
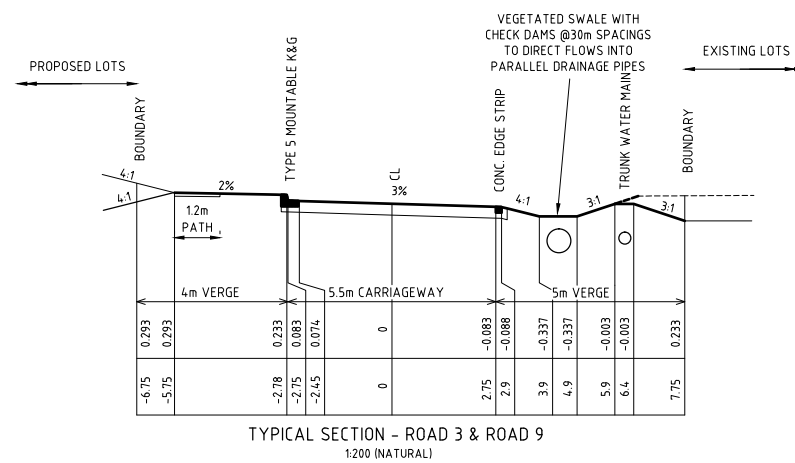
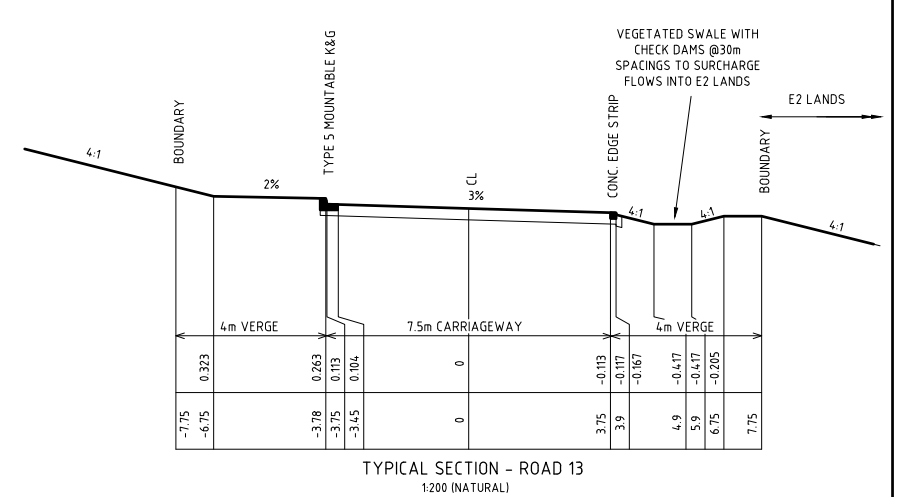
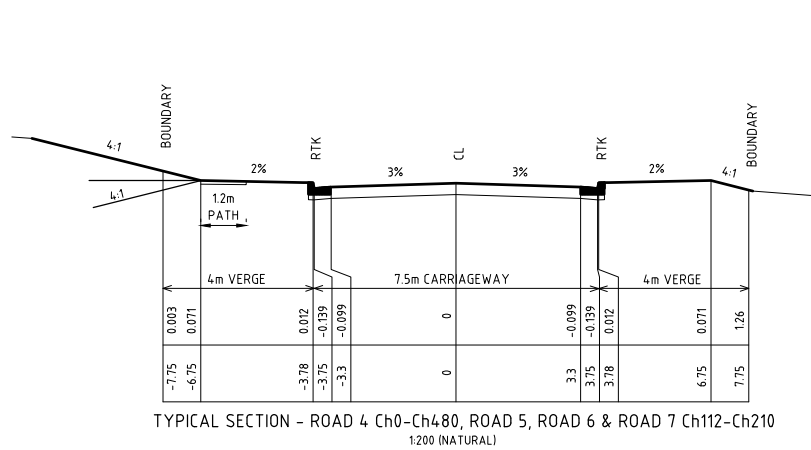
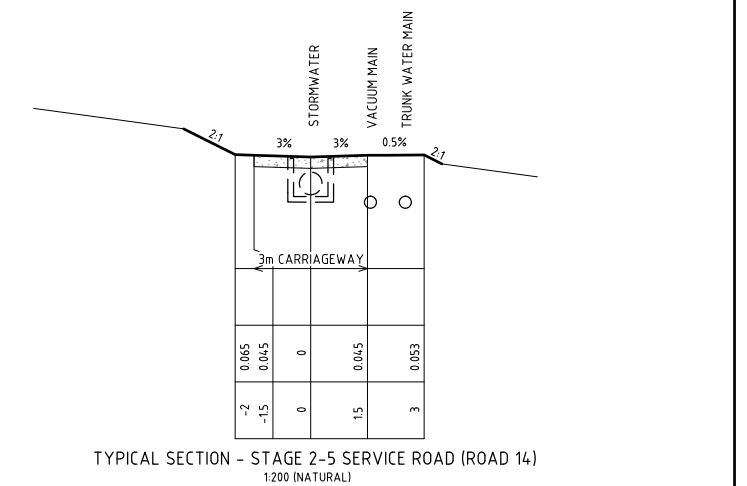
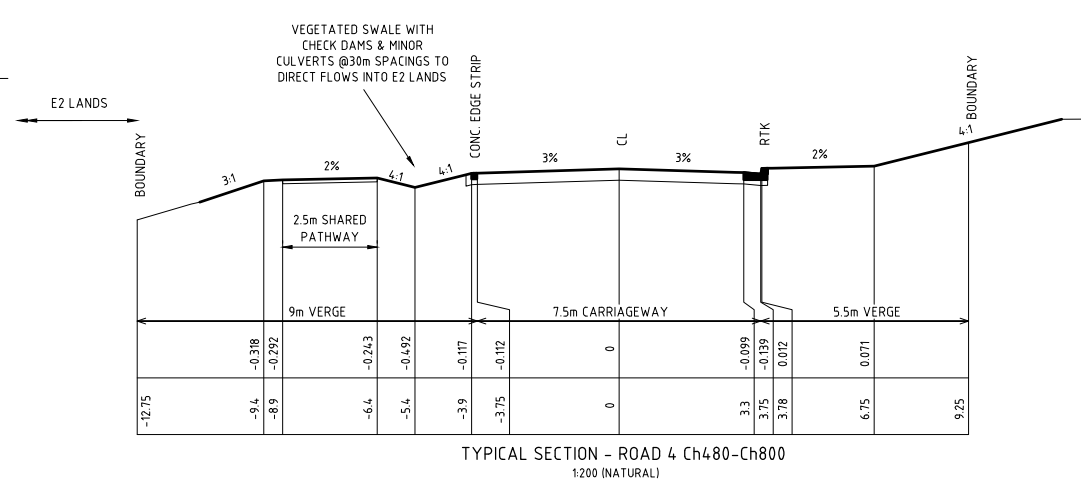
PLAN OF PROPOSED RESIDENTIAL SUBDIVISION
STAGE 1 PRECINCT RELEASE PLAN
LOT 2 DP 1154170
VINEY CREEK ROAD, NORTH SHEARWATER

CLIENT: WOLIN PTY LTD

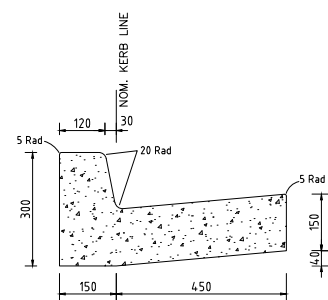
JOB No.: 205532

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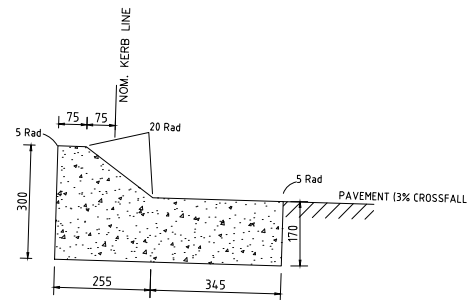
COUNCIL MIDCOAST	REFERENCE 21800046
PARISH COWEAMBAH	SHEET SIZE A3
SCALE 1:2000 on A3	SHEET No. 10
DATE :	Plotted 14/09/18/04/18



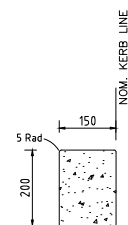
A	Original Issue	AV	AV	CG*	BL*	18/4/18
REV	DETAILS OF AMENDMENT	SIGNED	DRAWN	CHECKED	APPROVED	DATE
*	Denote the original signature and date when revision was issued.					



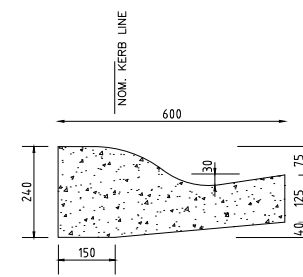
TYPE 1 150mm KERB & GUTTER
NOT TO SCALE
ALL DETAILS PER GLC STD. No.100



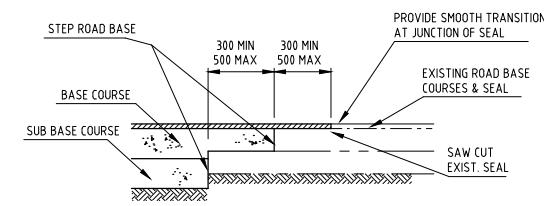
TYPE 3 MOUNTABLE KERB & GUTTER
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ALL DETAILS PER GLC STD. No.100



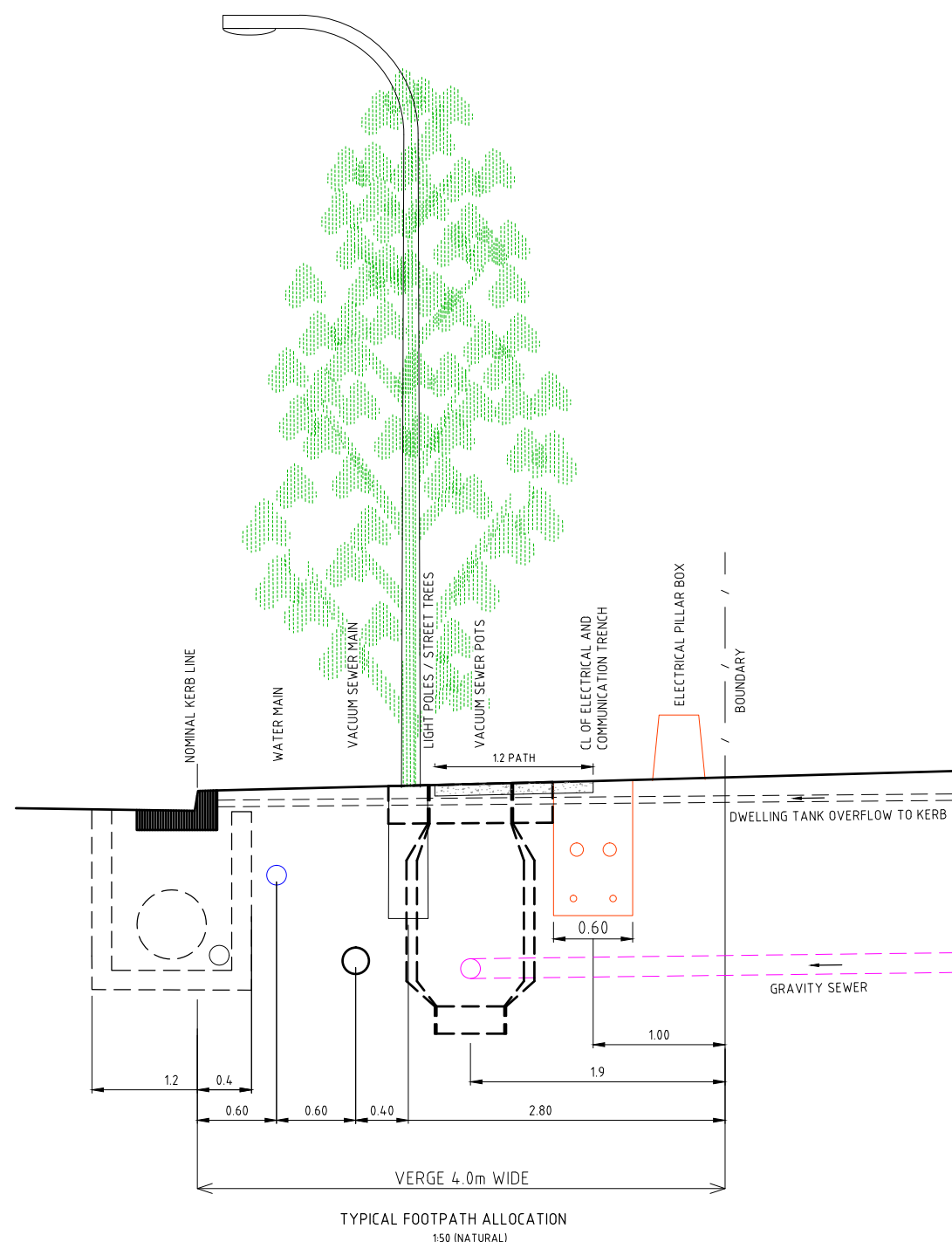
TYPE 5 EDGE STRIP
NOT TO SCALE
ALL DETAILS PER GLC STD. No.100



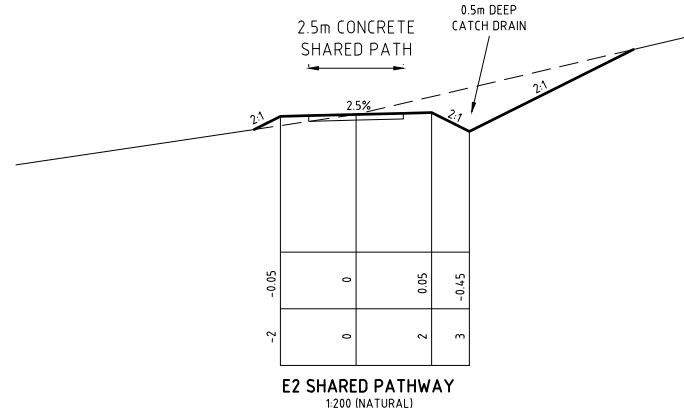
TYPE 8 ROLL KERB & GUTTER
NOT TO SCALE
ALL DETAILS PER GLC STD. No.100



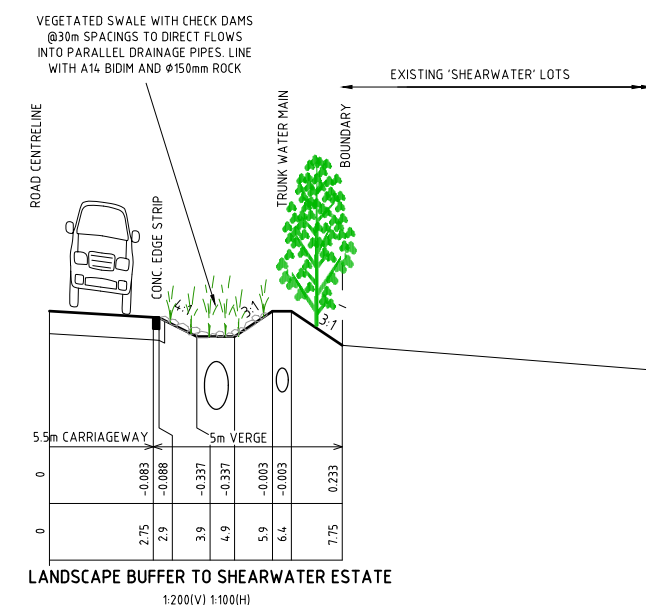
KEY JOINT DETAIL BETWEEN
NEW & EXISTING PAVEMENT
NOT TO SCALE



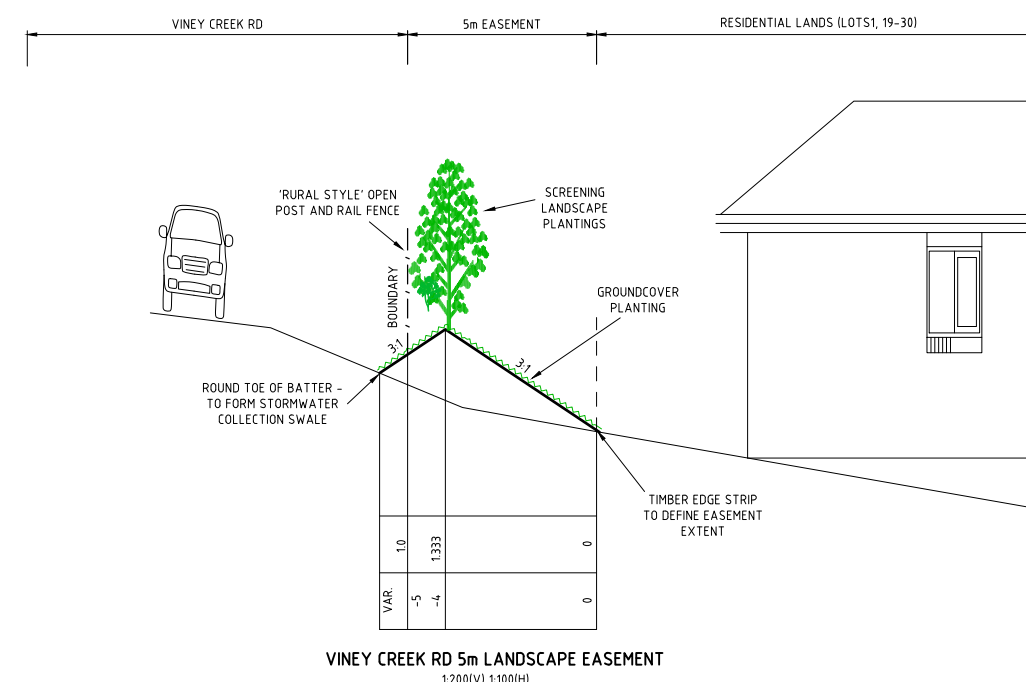
TYPICAL FOOTPATH ALLOCATION
150 (NATURAL)



E2 SHARED PATHWAY
1:200 (NATURAL)



LANDSCAPE BUFFER TO SHEARWATER ESTATE
1:200(V) 1:100(H)



VINEY CREEK RD 5m LANDSCAPE EASEMENT
1:200(V) 1:100(H)

REV	DETAILS OF AMENDMENT	DESIGNED	DRAWN	CHECKED	APPROVED	DATE
A	Original Issue	AV	AV	CG*	BL*	18/4/18*
* Denote the original signature and date when revision was issued.						

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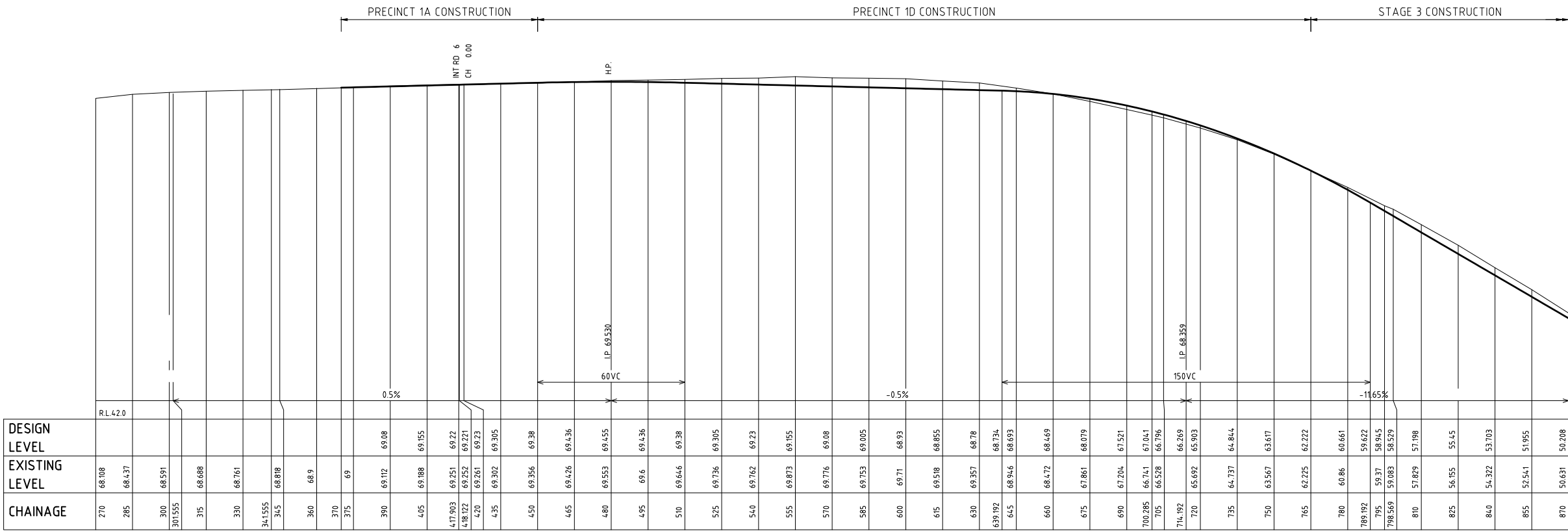
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AS SHOWN

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JOB No. : 217416

FILE : 21800048
DATE : Plotted 15/38 10/07/18

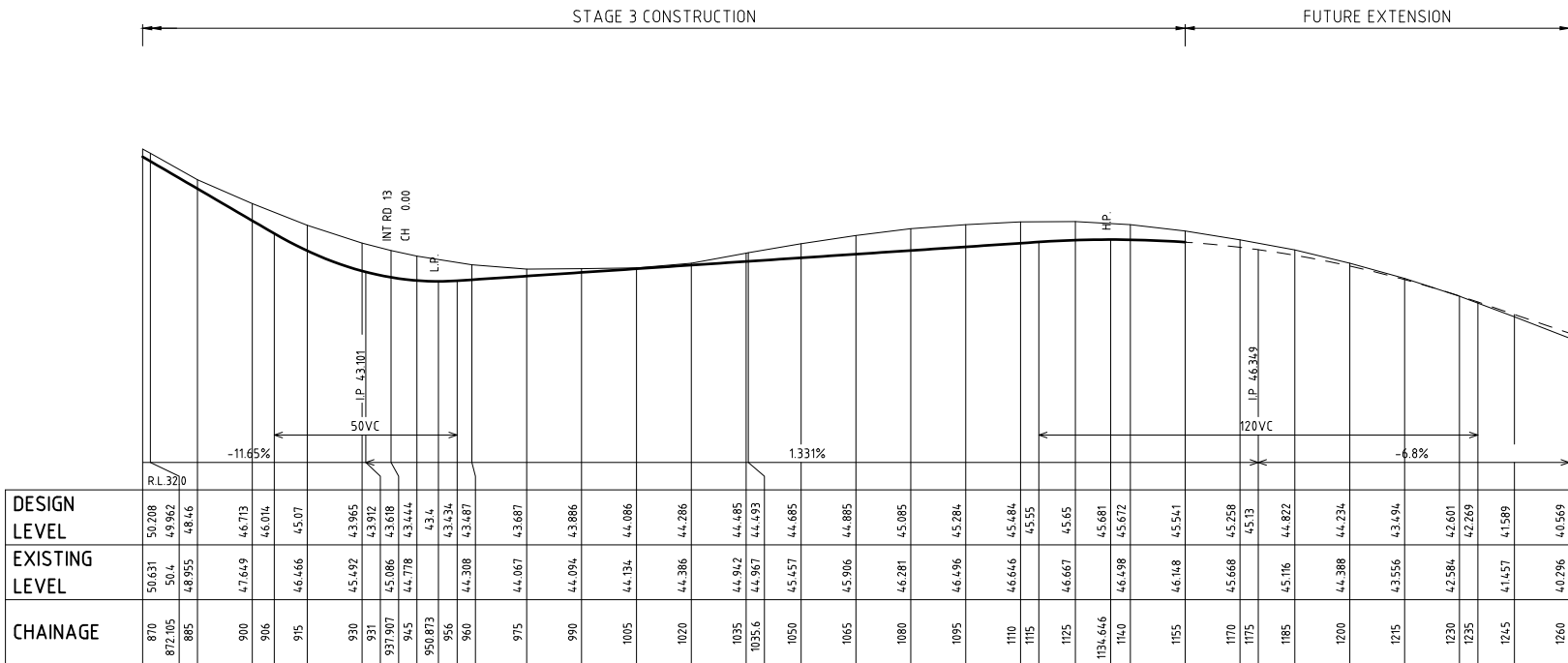
SHEET
SIZE
A3

COMPUTER FILE : S:\projects\North Shearwater\DWG\Stg1-3 DA Design Plans.dwg



ROAD No. 1

H=12000 V=1400



ROAD No. 1

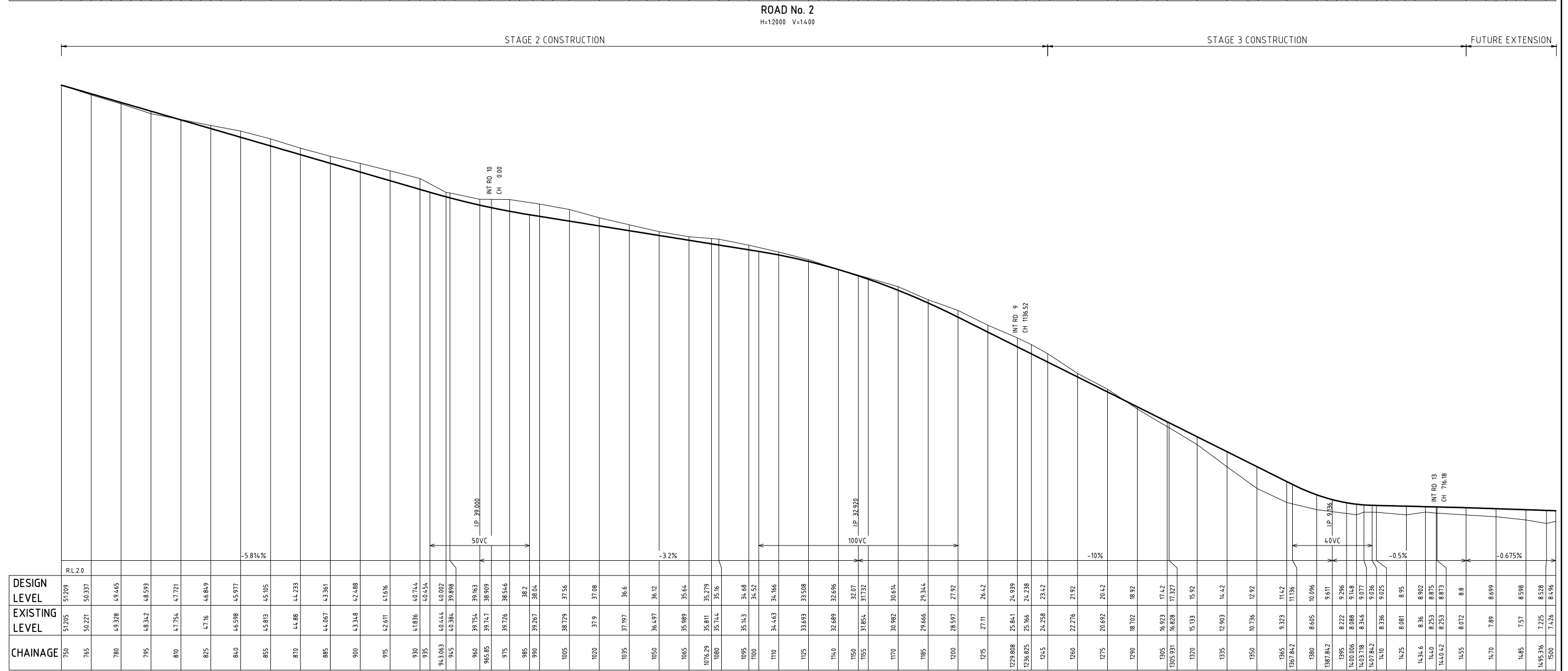
H=12000 V=1400

PRELIMINARY ROAD
LONGITUDINAL SECTIONS

A	Original Issue	AV	AV	CG*	BL*	18/4/18*
REV	DETAILS OF AMENDMENT	DESIGNED	DRAWN	CHECKED	APPROVED	DATE
* Denote the original signature and date when revision was issued.						

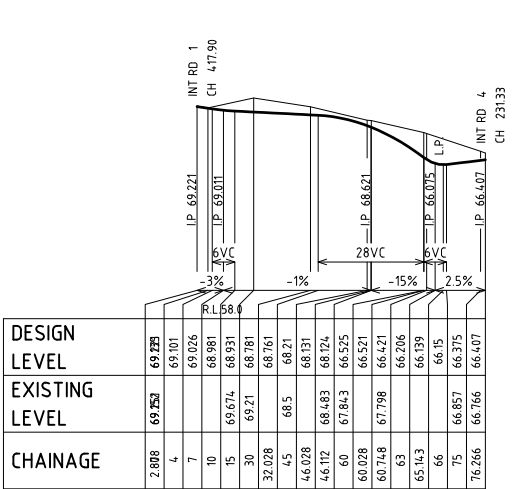
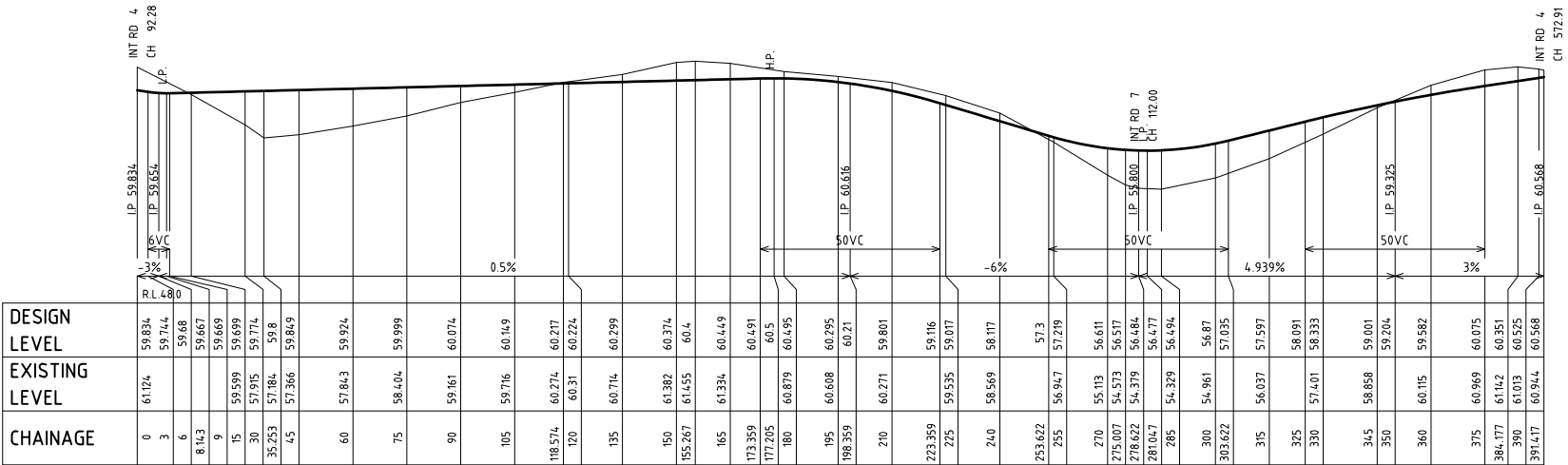
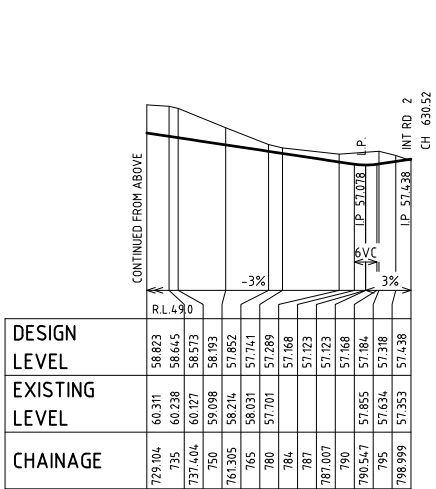
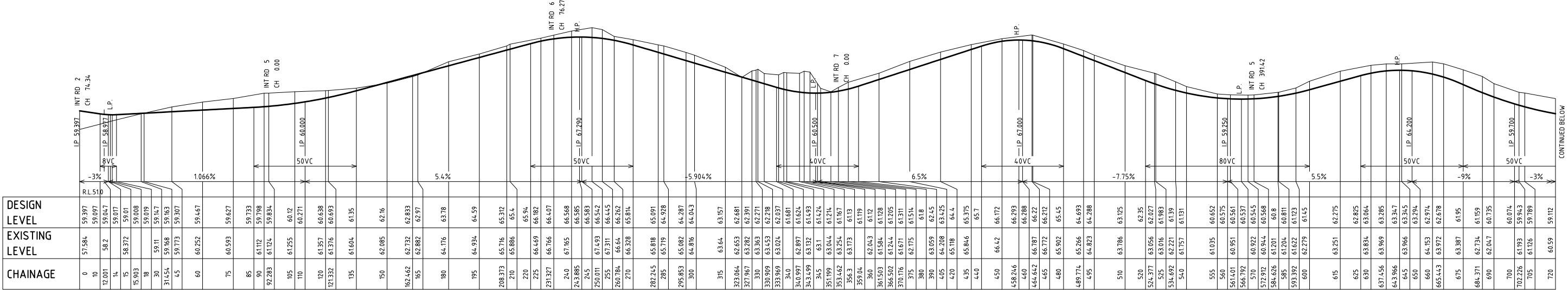
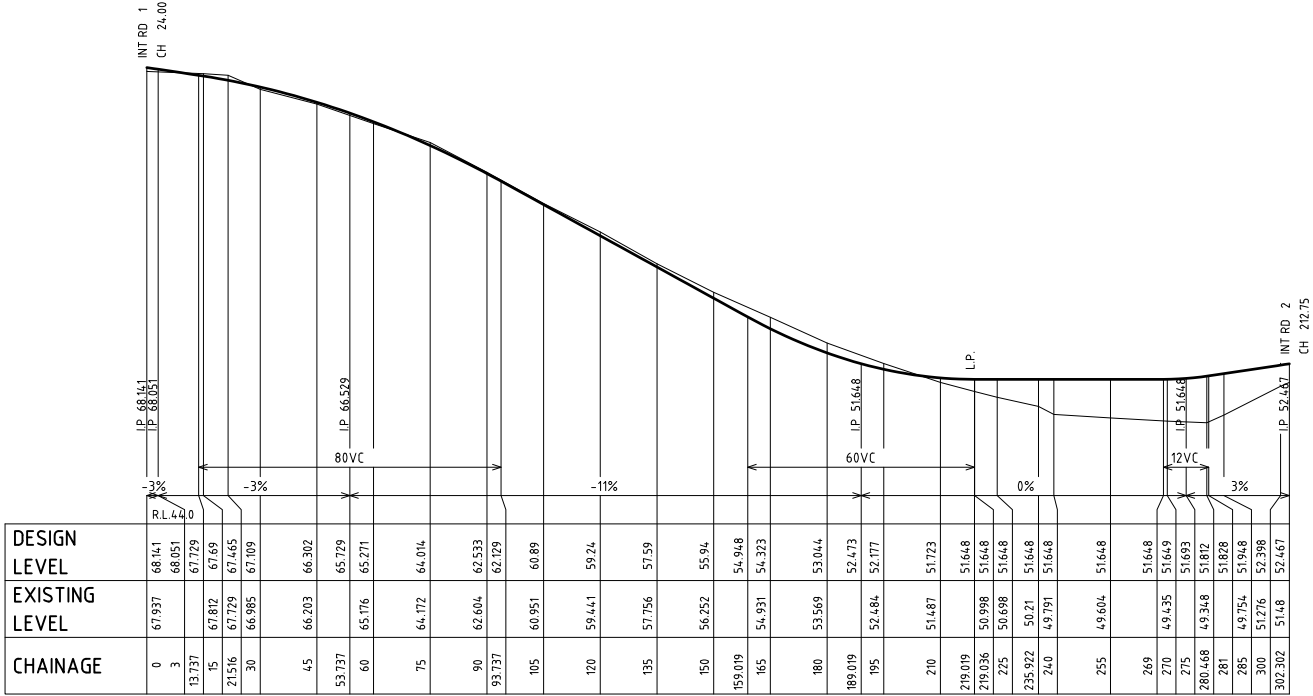
TATTERSALL
LANDER Pty Ltd
DEVELOPMENT CONSULTANTS

SCALE : AS SHOWN	SHEET No. :13	FILE : 21800049	SHEET SIZE A3
COMPUTER FILE : S:\projects\North Shearwater\Dwg\S1g1-3 DA Design Plans.dwg	JOB No. : 217416	DATE : Plotted 14/09 18/04/18	



A	Original Issue	AV	AV	CG*	BL*	18/4/18*
REV	DETAILS OF AMENDMENT	DESIGNED	DRAWN	CHECKED	APPROVED	DATE
* Denote the original signature and date when revision was issued.						

SCALE :	SHEET No. :14	FILE : 21800050	SHEET SIZE
AS SHOWN	JOB No. : 217416	DATE : Plotted 14-09-18/04/18	A3
COMPUTER FILE : S:\projects\North Shearwater\DWG\Stg1-3 DA Design Plans.dwg			



PRELIMINARY ROAD
LONGITUDINAL SECTIONS

REV	DETAILS OF AMENDMENT	DESIGNED	DRAWN	CHECKED	APPROVED	DATE
A	Original Issue	AV	AV	CG*	BL*	18/4/18*
* Denote the original signature and date when revision was issued.						

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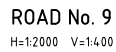
SCALE :
AS SHOWN

SHEET No. :15
JOB No. : 217416

FILE : 21800051
DATE : Plotted 14.09 18/04/18

SHEET
SIZE
A3

COMPUTER FILE : S:\projects\North Shearwater\Dwg\S1g1-3 DA Design Plans.dwg



A	Original Issue	AV	AV	CG*	BL*	18/4/18*
REV	DETAILS OF AMENDMENT	DESIGNED	DRAWN	CHECKED	APPROVED	DATE
*	Denote the original signature and date when revision was issued.					

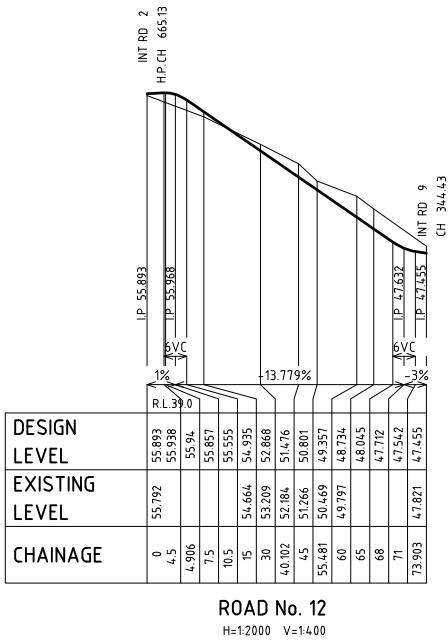
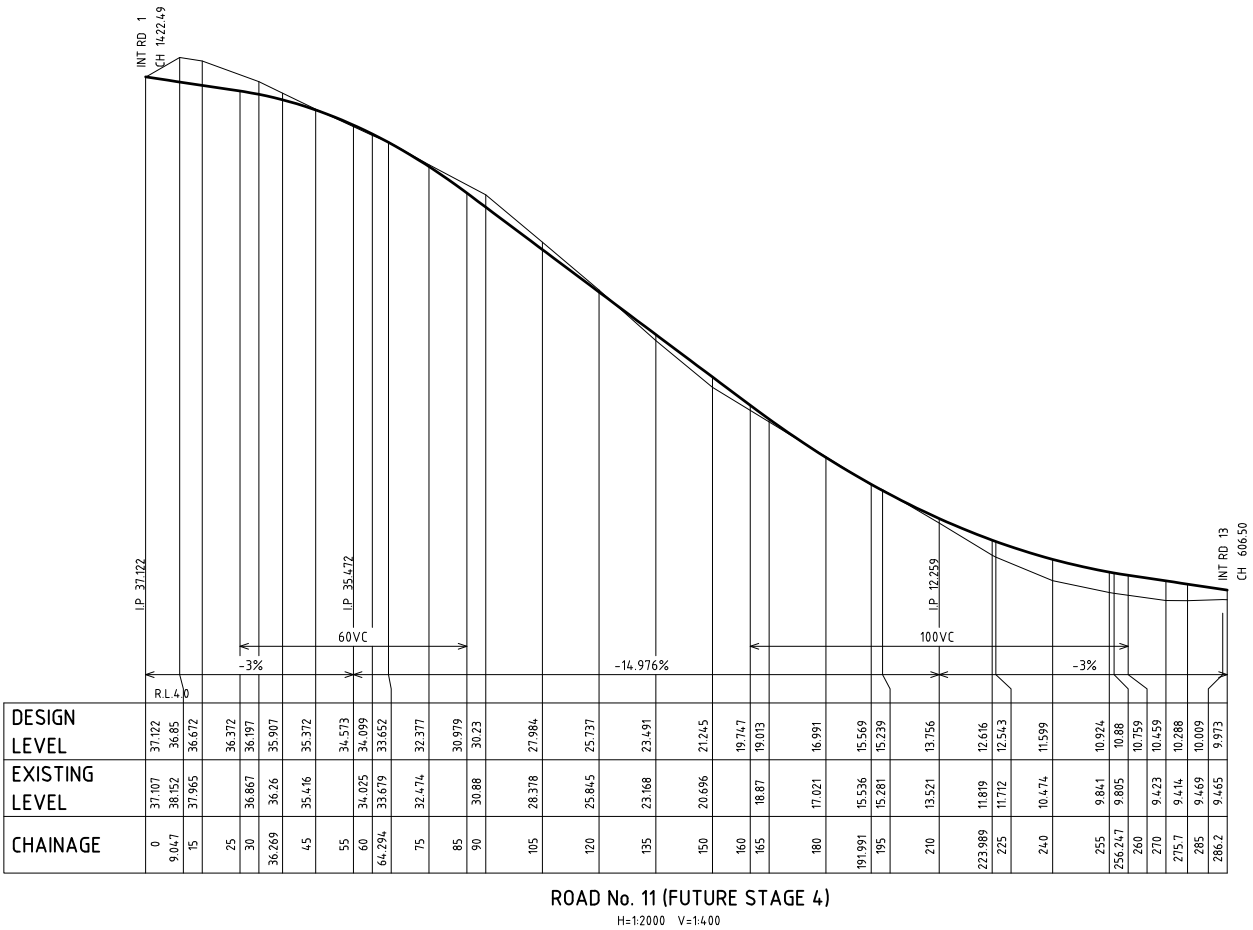
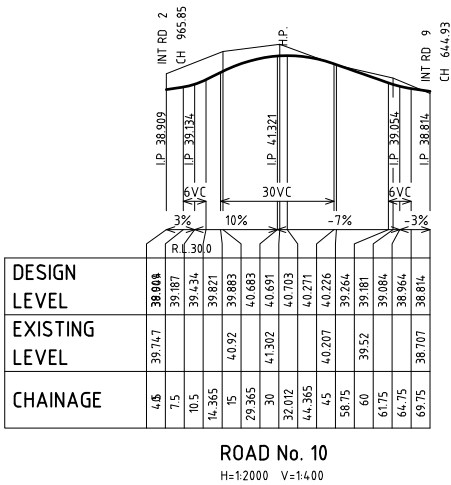
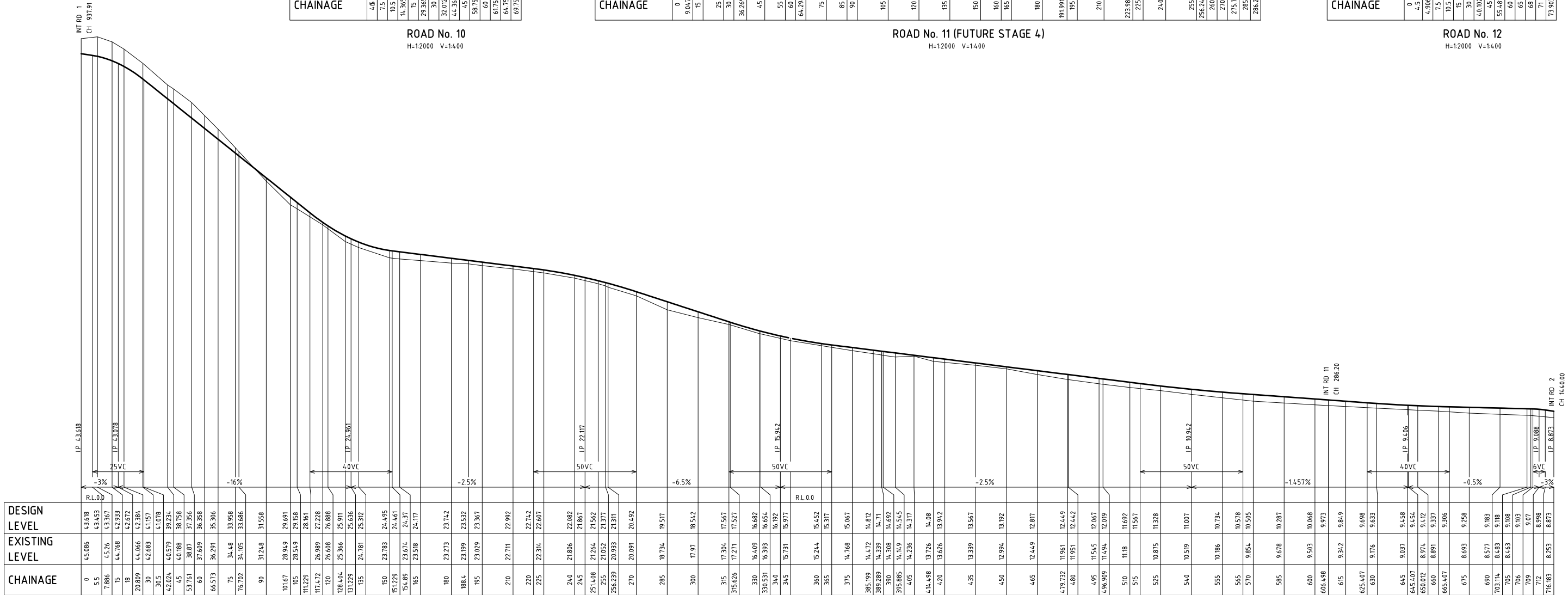
SCALE :	AS SHOWN
COMPUTER FILE :	S

FILE :	21800052
DATE :	Plotted 14:0

to1-3 DA Design Plans

	SHEET
	SIZE
	A3

COMPUTER FILE : S:\projects\North Shearwater\Dwg\Stq1-3 DA Design Plans.dwg



PRELIMINARY ROAD
LONGITUDINAL SECTIONS

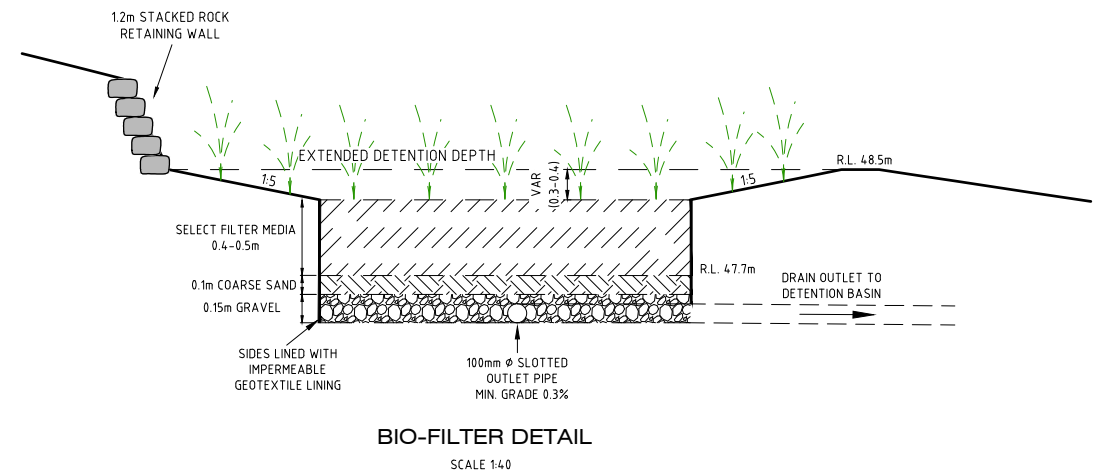
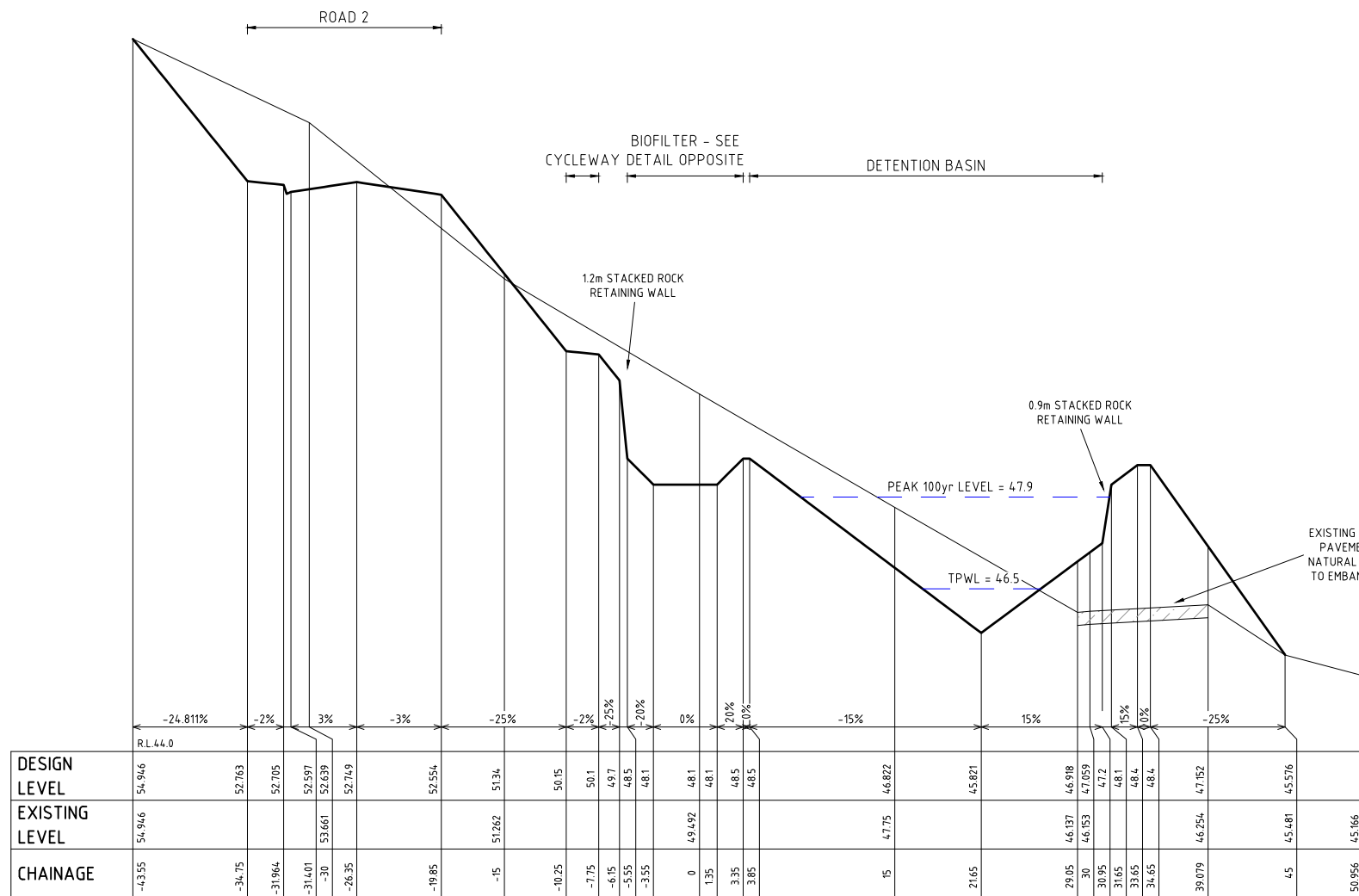
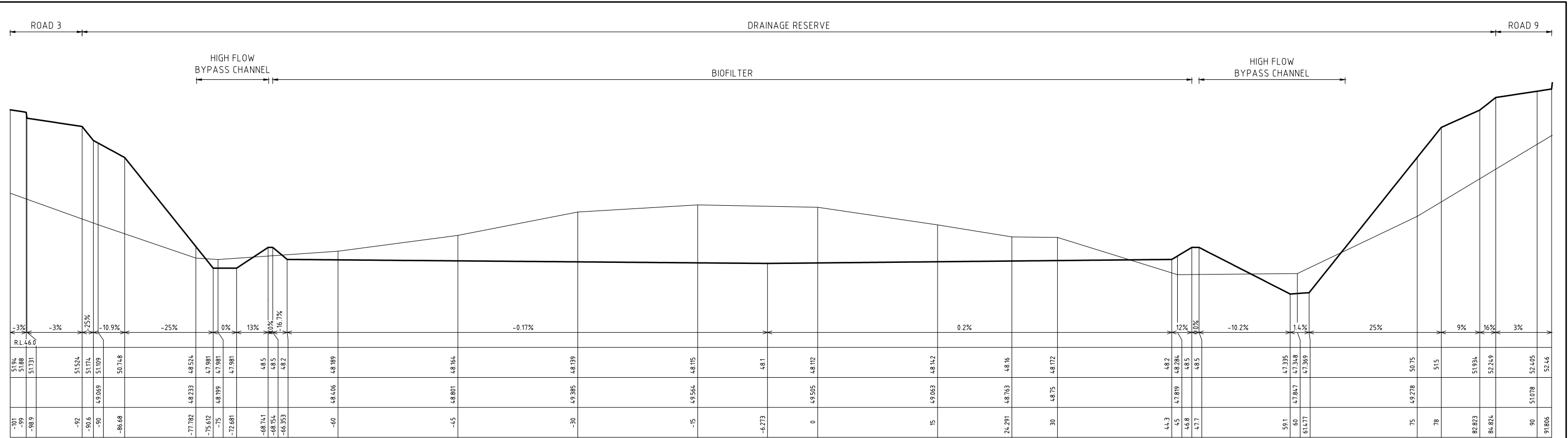
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* Denote the original signature and date when revision was issued.						

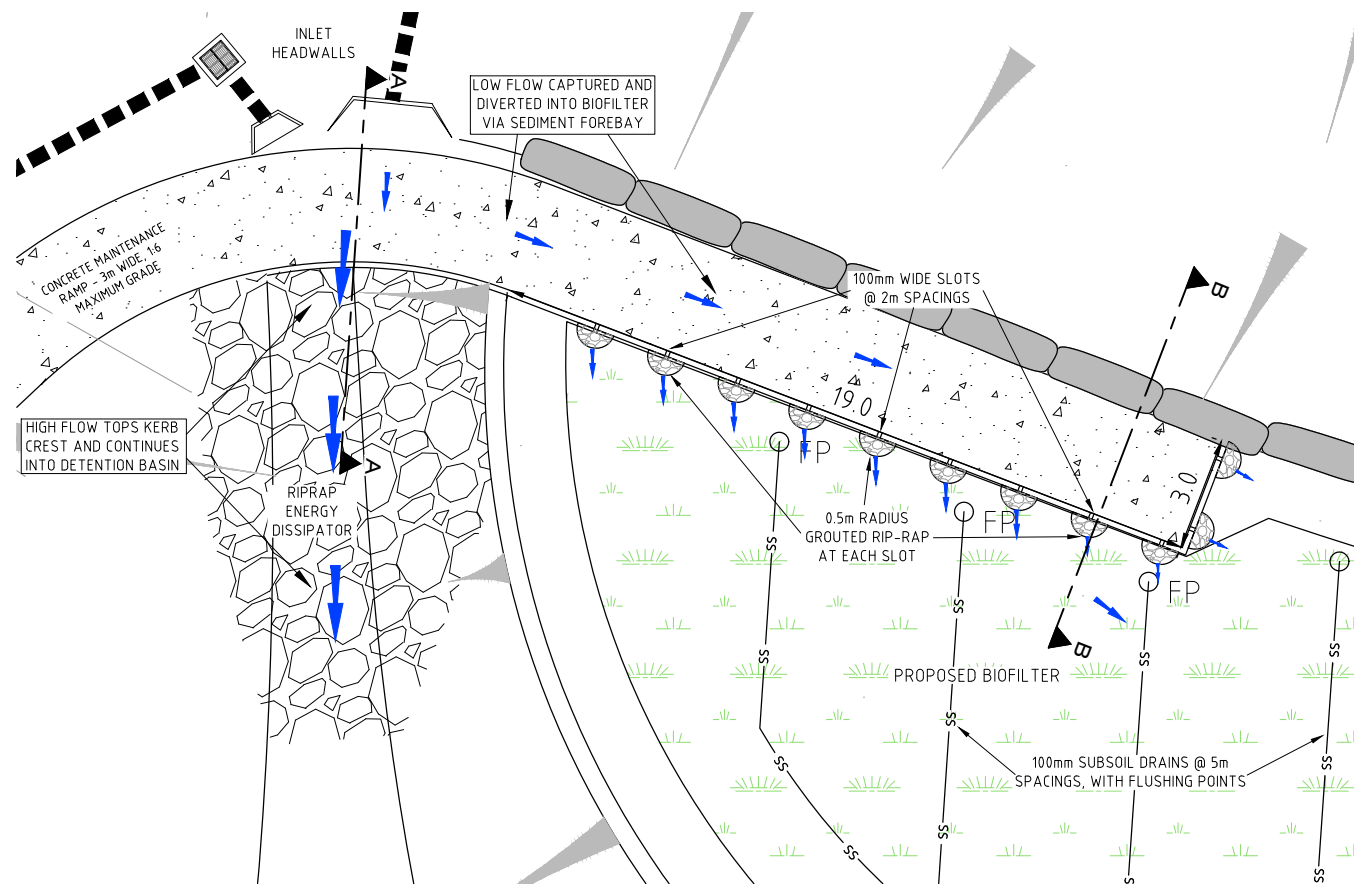
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SCALE :	SHEET No. :17	FILE : 21800053	SHEET SIZE
AS SHOWN	JOB No. : 217416	DATE : Plotted 14/09 18/04/18	A3
COMPUTER FILE : S:\projects\North Shearwater\Drawg\S1g1-3 DA Design Plans.dwg			



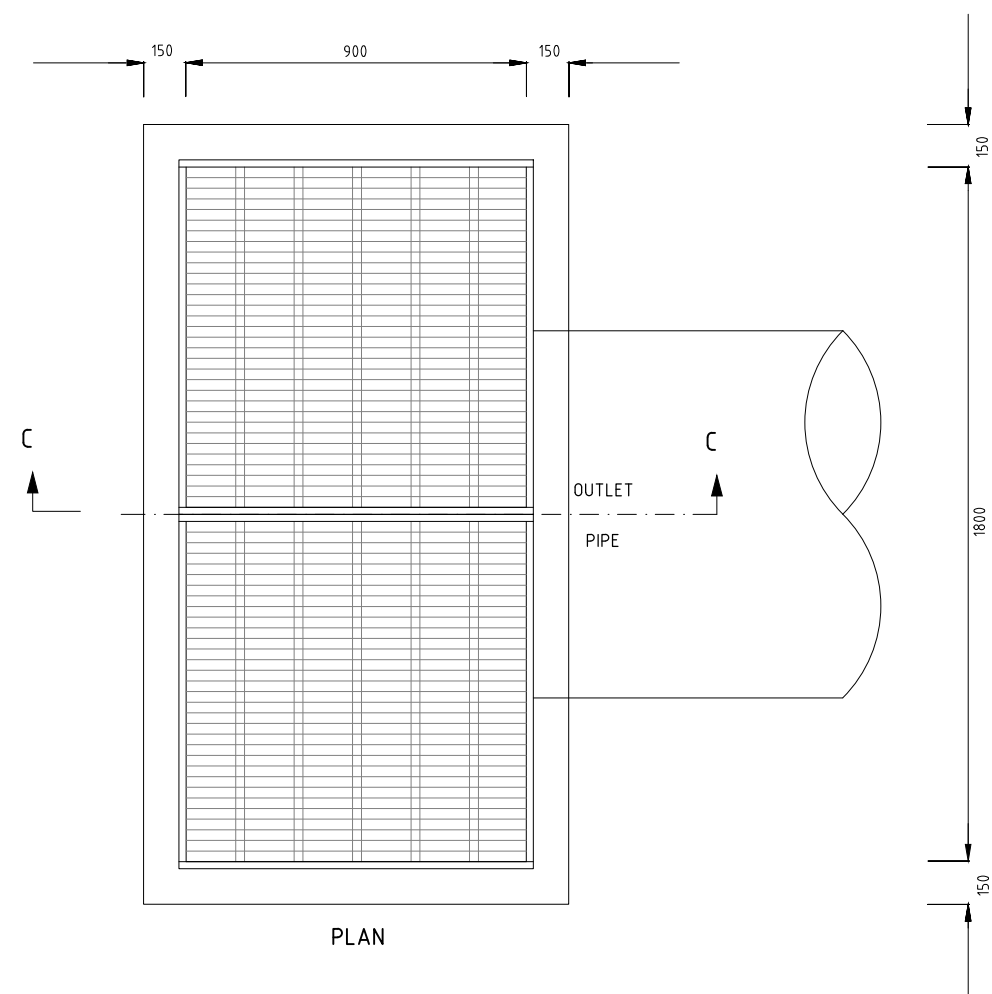




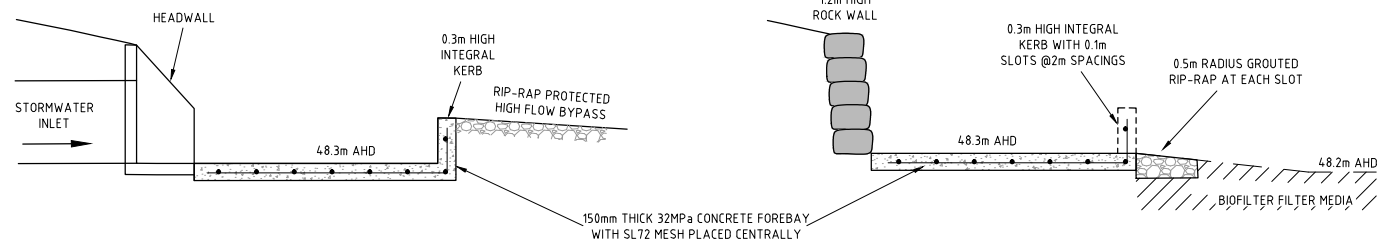
BASIN OUTLET STRUCTURE

NOT TO SCALE

ADOPTED FROM LAKE MACQUARIE CITY COUNCIL STANDARD EGSD-422



PLAN

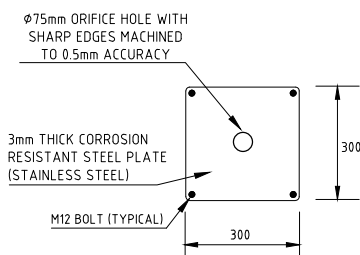


SECTION A-A

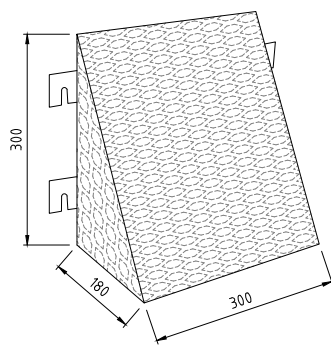
NOT TO SCALE

SECTION B-B

NOT TO SCALE



ORIFICE PLATE DETAILS

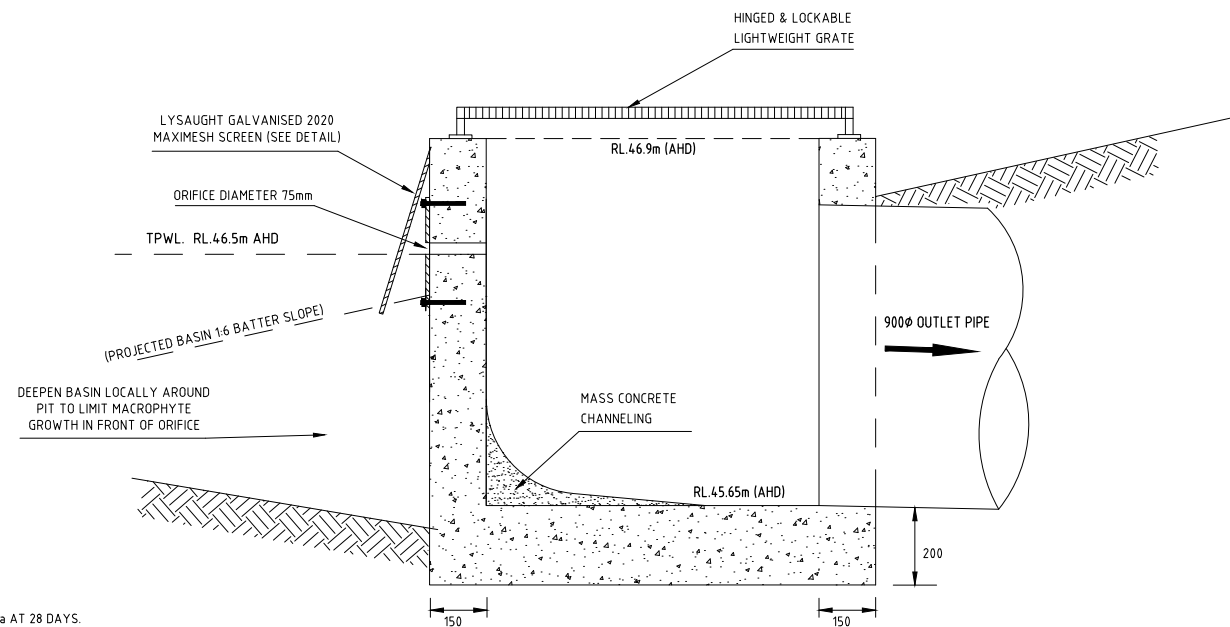


TYPICAL MAXIMESH SCREEN DETAIL

NOT TO SCALE

CONCRETE AND STEEL NOTES

1. COMPRESSIVE STRENGTH OF CONCRETE TO BE F_c 40MPa AT 28 DAYS.
2. MINIMUM COVER OF CONCRETE OVER REINFORCEMENT TO BE 70mm.
3. MAXIMESH SCREEN MUST BE PLACED SO THAT THE LONG AXIS OF THE OVAL SHAPED HOLES ARE HORIZONTAL WITH THE PROTRUDING LIP ANGLED UPWARDS & FACING DOWNSTREAM.
4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE
5. ALL STEEL WORK TO BE HOT - DIPPED GALVANIZED AFTER FABRICATION.
6. ALL BOLTS/ANCHORS SET IN CONCRETE SHALL BE STAINLESS STEEL.
7. ALL WELDS TO BE 6mm FILLETS UNLESS SPECIFIED OTHERWISE.
8. MINIMUM BOLT SIZE TO BE M16.
9. MINIMUM THICKNESS OF CONCRETE WALLS TO BE 150mm.
10. ALL INTERNAL SURFACES TO BE STEEL FLOAT FINISH.



SECTION C-C

**MODIFIED RM11A GRATED SURFACE INLET PIT
BASIN OUTLET STRUCTURE**

NOT TO SCALE

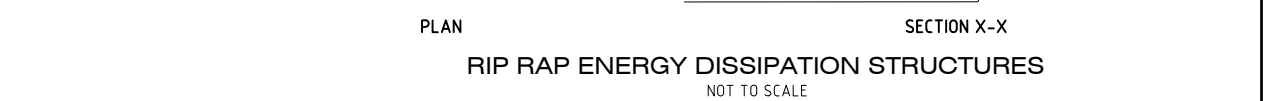
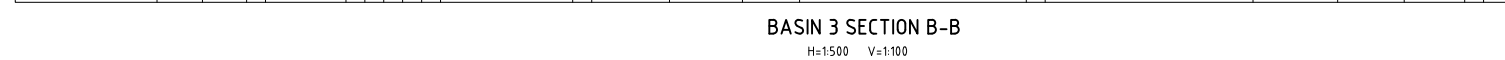
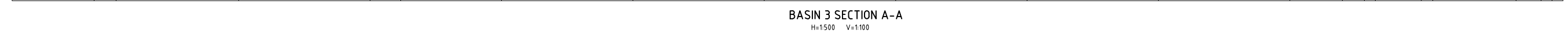
(ALL OTHER DETAILS PER RM.11 TYPE A)

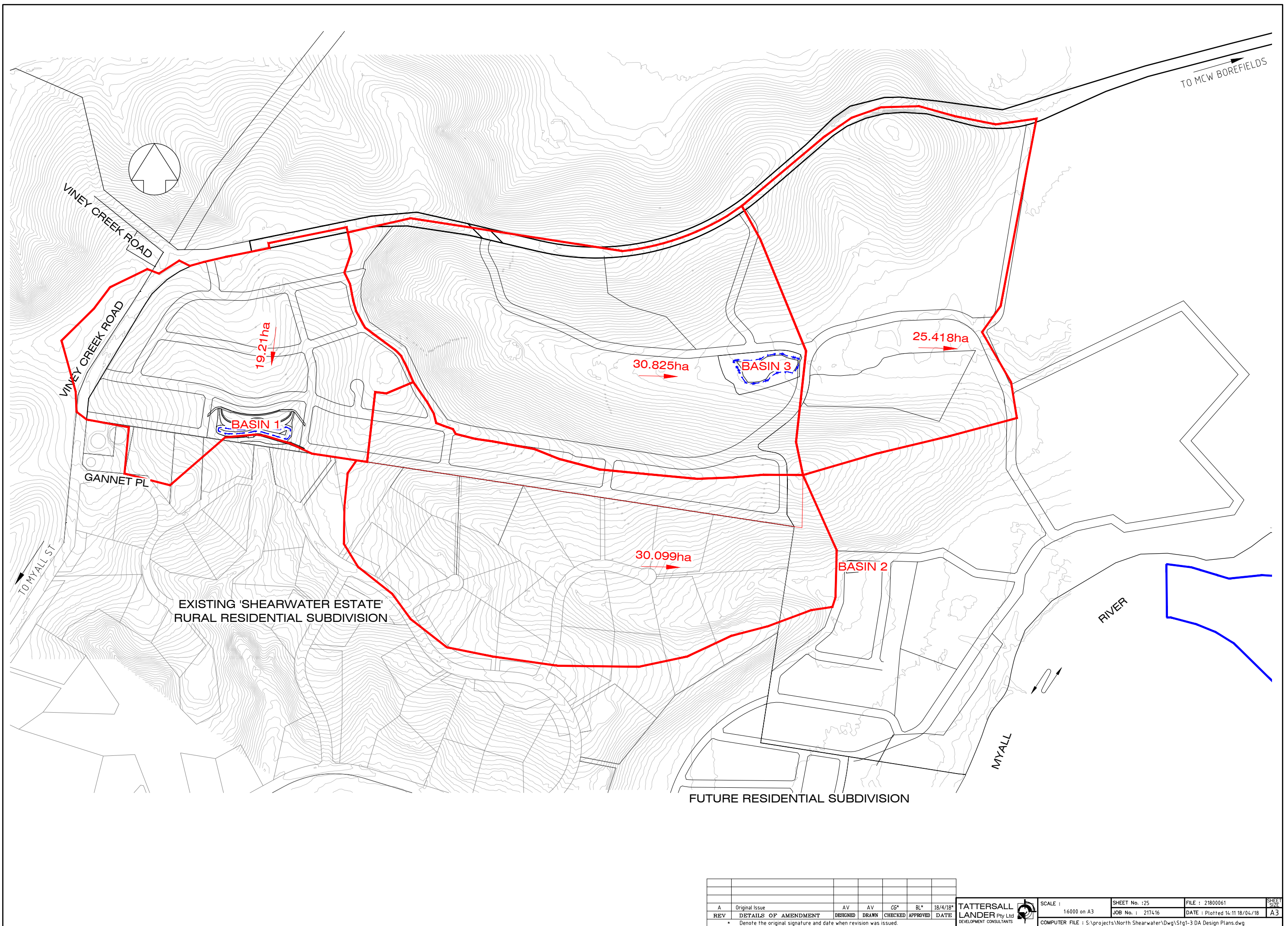
STAGE 1 BASIN DETAILS

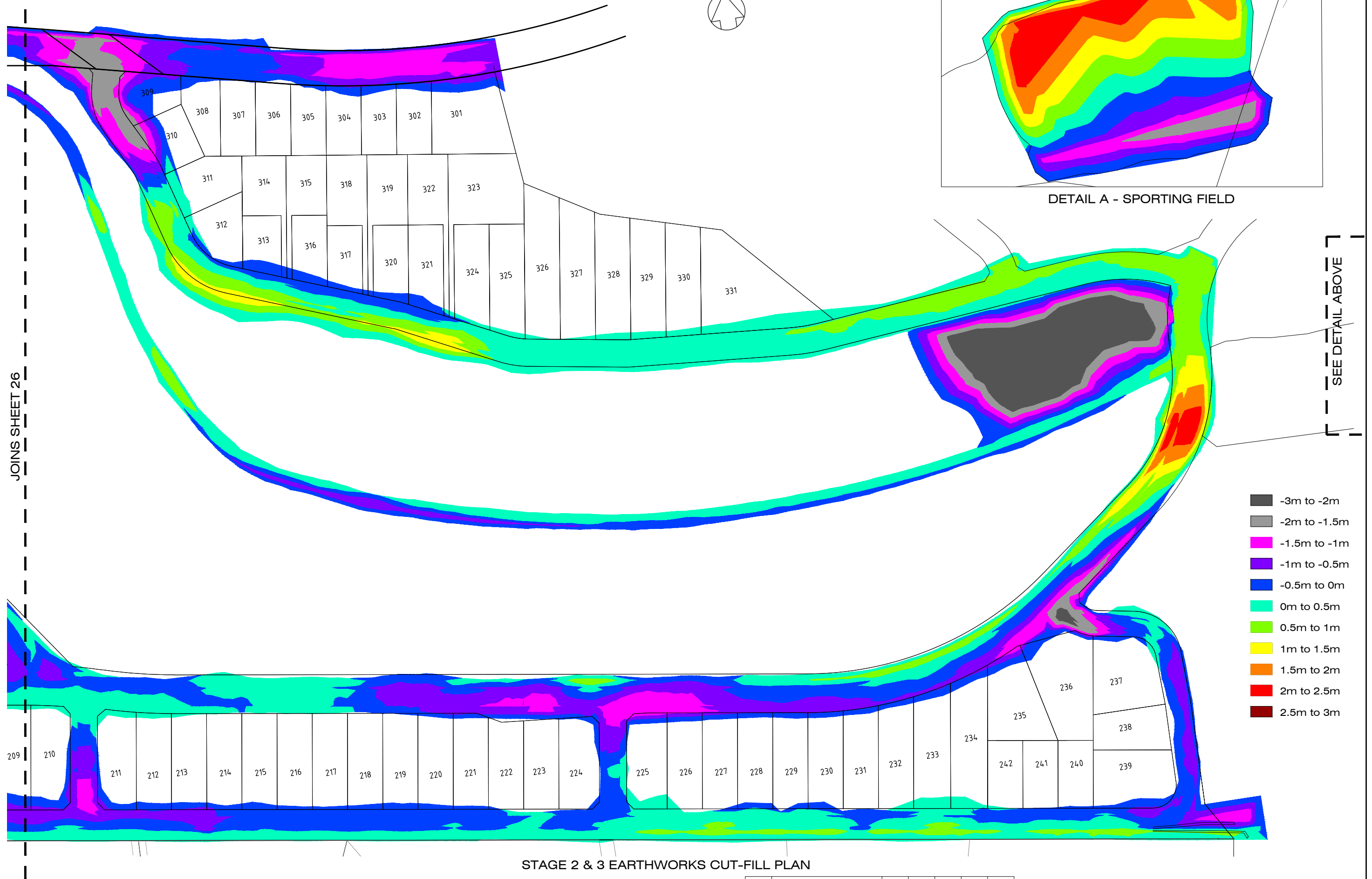
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A	Original Issue	AV	AV	CG*	BL*	18/4/18*
* Denote the original signature and date when revision was issued.						

TATTERSALL LANDER Development Consultants	SCALE : AS SHOWN	SHEET No. : 21 JOB No. : 217416	FILE : 21800057 DATE : Plotted 14/10/18/04/18	SHEET SIZE A3
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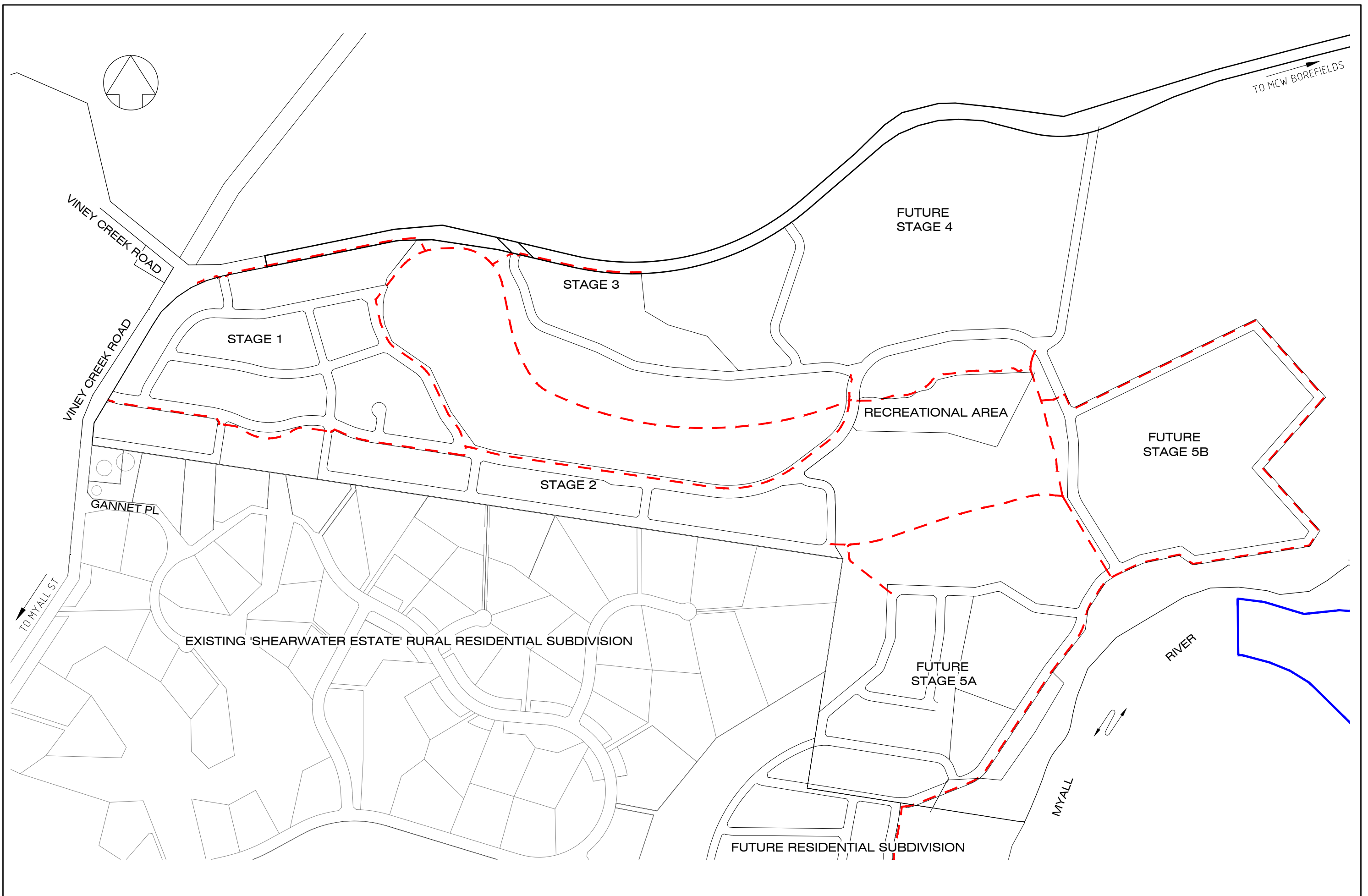






STAGE 2 & 3 EARTHWORKS CUT-FILL PLAN

[illegible]



--- PROPOSED 2.5m
SHARED PATHWAY

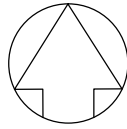
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REV	DETAILS OF AMENDMENT	DESIGNED	DRAWN	CHECKED	APPROVED	DATE			
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**TATTERSALL
LANDER** PTY LTD
DEVELOPMENT CONSULTANTS
ENGINEERING, SURVEYING & PLANNING
2 Bourke St. P.O.Box 580
RAYMOND TERRACE 2324
Fax (02) 49871733 Phone (02) 49871500

OVERALL SHARED PATHWAYS PLAN
DURNESS STATION RESIDENTIAL SUBDIVISION
LOT 2 DP 1154170
VINEY CREEK ROAD, NORTH SHEARWATER

CLIENT: WOLIN PTY LTD JOB No.: 205532 COMPUTER FILE : S:\projects\North Shearwater\Dwg\S1g1-3 DA Design Plans.dwg

COUNCIL MIDCOAST	REFERENCE 21800064
PARISH COWEAMBAH	SHEET SIZE A3
SCALE 1:6000 on A3	SHEET No. 28
DATE :	Plotted 14/11/18/04/18



STANDARD SYMBOLS

- Extent Of Works

EW
- Sediment Fence

—○—○—○—
- Straw Bale Sediment Filter

|||||
- Soil Stock Pile

S.S.P.
- Site Safety Fencing

BF
- Site Access with "Cattle Grid" shaker bars

|||||
- Temporary Sediment Basin

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NOTE  
FINAL LOCATION OF TEMPORARY BASIN  
AND SOIL STOCKPILES TO BE APPROVED  
BY THE COUNCIL & SUPERINTENDENT  
PRIOR TO CONSTRUCTION



STAGE 1 CONCEPT SOIL AND WATER MANAGEMENT PLAN

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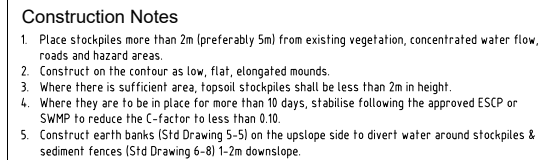


3. This plan is to be read in conjunction with other engineering plans and any written instructions that may be issued.
2. The contractor should implement all soil erosion and sediment control measures prior to disturbance of the related catchment area and to the satisfaction of the Superintendent.
3. The location of "silt" fences, barrier fences, sediment traps, basins and other devices are indicative only and final locations are to be decided on site. Variations will be permitted to best suit the circumstances.
4. Construct both proposed dams before large scale disturbance of upstream lands. These dams are to be operated as sedimentation basins until all disturbed areas are stabilised. Captured water to be tested and flocculated as necessary (in line with The Blue Book recommendations) before release downstream. Captured water may also be re-used for dust suppression during construction.
5. Cleared vegetation must be disposed of by :-
  - i) chipping or mulching for future landscaping and usage, or
  - ii) transport to an approved landfill facility.
5. Temporary crossbanks (bunds constructed with earth, straw bales or sandbags), shall be constructed during roadworks to limit slope length, where possible, to 80 metres. These shall be constructed immediately prior to forecast rain and during temporary closure of the site, including weekends.
6. Temporary rehabilitation should be undertaken on disturbed areas where works have stopped and soils are expected to remain exposed for two months.
7. Sediment barriers (e.g. sandbags or straw bales) should be located upstream of stormwater inlet pits prior to the road surface being paved and lands upslope being rehabilitated.
8. At the conclusion of each day sand bags are to be placed at the end of completed sections of road pavement to prevent scouring.
9. The contractor will inspect all erosion and pollution control works at least weekly and following every rainfall event greater than 5mm, providing particular attention to the following matters :
  - (a) Ensure drains operate effectively and initiate repair as required.
  - (b) Remove spilled sand (or other materials) from hazard areas, including lands closer than 5 metres from likely areas of concentrated or high velocity flows such as waterways and paved areas.
  - (c) Ensure rehabilitated lands have effectively reduced the erosion hazard and initiate upgrading or repair as appropriate.
  - (d) Construct additional erosion and/or sediment control works as might become necessary to ensure the desired protection is given to downslope lands and waterways, i.e., make ongoing changes to the plan.
  - (e) Maintain erosion and sediment control measures in a functioning condition until all earthwork activities are completed and the site is rehabilitated.
  - (f) Remove temporary soil conservation structures as a last activity in the rehabilitation program.

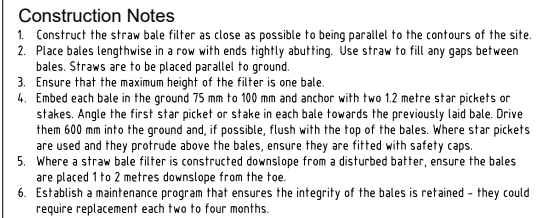
10. Utilise a single access only to the stock pile sites.
11. Do not taint clean catchment water with silt from the works.
12. Drop inlets which do not outlet to silt traps shall be blocked until all works are completed.
13. Rehabilitate the site as soon as possible after the completion of construction activities and within 10 working days. Lands where works are not to continue for more than 20 working days must be rehabilitated. Such rehabilitation shall involve the spraying of a straw-bitumen mulch to the disturbed lands or equivalent.
14. Access areas limited to a maximum width of 10 (preferably 5) metres.
15. All positions shown are approximate and are best determined on site in conjunction with the superintendent.
16. Conformity with this plan shall in no way reduce the responsibility of the Contractor to protect against water damage during the course of the contract.
17. Topsoil and spoil shall be stockpiled in non-hazard areas and protected from surface run-off by diversion drains or similar. Stockpiles shall be surrounded on downstream sides by silt fencing. Stockpiles shall be suitably compacted to inhibit erosion. Where the stockpiling period exceeds four (4) weeks, the stockpile shall be seeded to encourage vegetation growth.
18. Topsoil shall be respread and stabilised as soon as possible. Disturbed areas shall be left with a scarified surface to encourage water infiltration and assist keying in topsoil.
19. The contractor shall provide a turf strip behind all kerb and gutter at completion of footpath formation.
20. The contractor shall maintain grass cover until all works have been completed including the maintenance period, by frequent watering and mowing where required.
21. All drainage works shall be constructed and stabilised as quickly as possible to minimise risk of erosion.
22. Vehicular traffic shall be controlled during construction confining access where possible to proposed or existing road alignments plus 3 metres. Areas to be left undisturbed shall be marked off.
23. Site access shall be restricted to a nominated point. The construction of a shake-down area will be required at the entry to the site.
24. Facilities and/or equipment must be provided for the application of water to disturbed areas to minimise the generation of airborne dust from any area disturbed by construction activities.
25. Material removed from sediment control structures must be disposed of in a way that does not pollute waters or bushland.
26. Waste disposal containers must be provided on site for the collection and disposal of all industrial and domestic type wastes generated on site.
27. Concrete wastes or washings from any concrete mixture or deliveries must not be deposited in any location where they can flow or be washed into waters.
28. Runoff from vehicle, construction plant or mobile plant maintenance and cleaning areas must be contained, collected and disposed of in a manner to prevent entry into any waters, including sediment retention ponds.
29. Fuelling of vehicles and construction plant must be carried out with an operator or driver present, and in a way that prevents any spillage occurring.



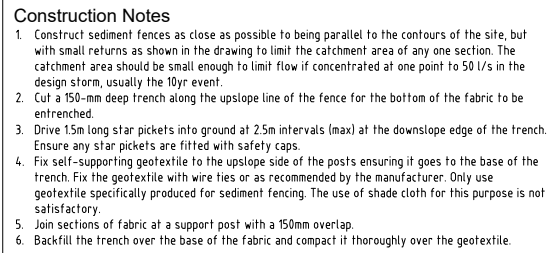
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|            |        |
|------------|--------|
| STOCKPILES | SD 4-1 |
|------------|--------|



STRAW BALE FILTER SD 6-7

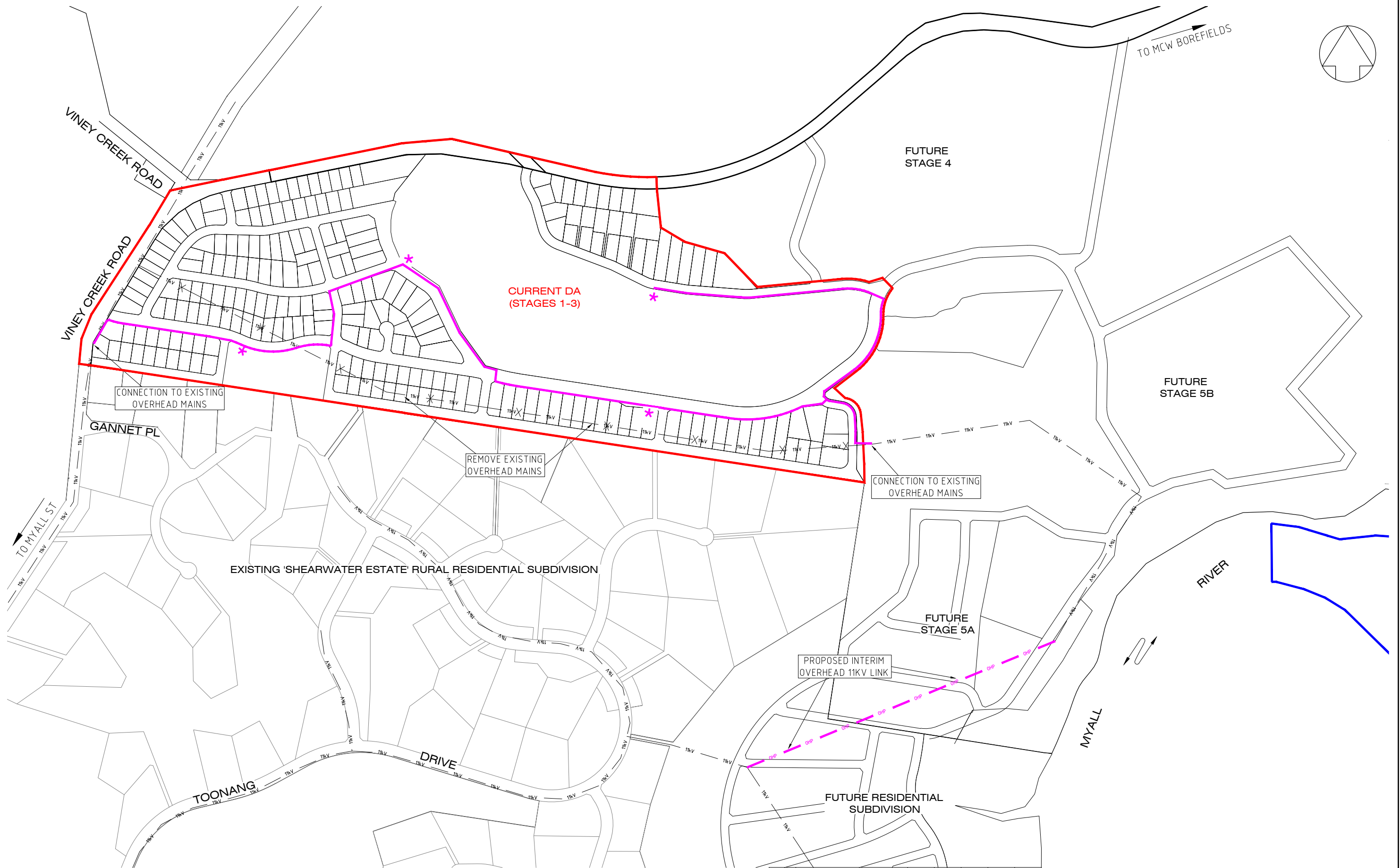


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| SEDIMENT FENCE | SD 6-8 |
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## EROSION AND SEDIMENT CONTROL NOTES

- PROPOSED 11KV U/G CABLE
- PROPOSED SUBSTATION
- PROPOSED INTERIM 11KV O/H CABLE

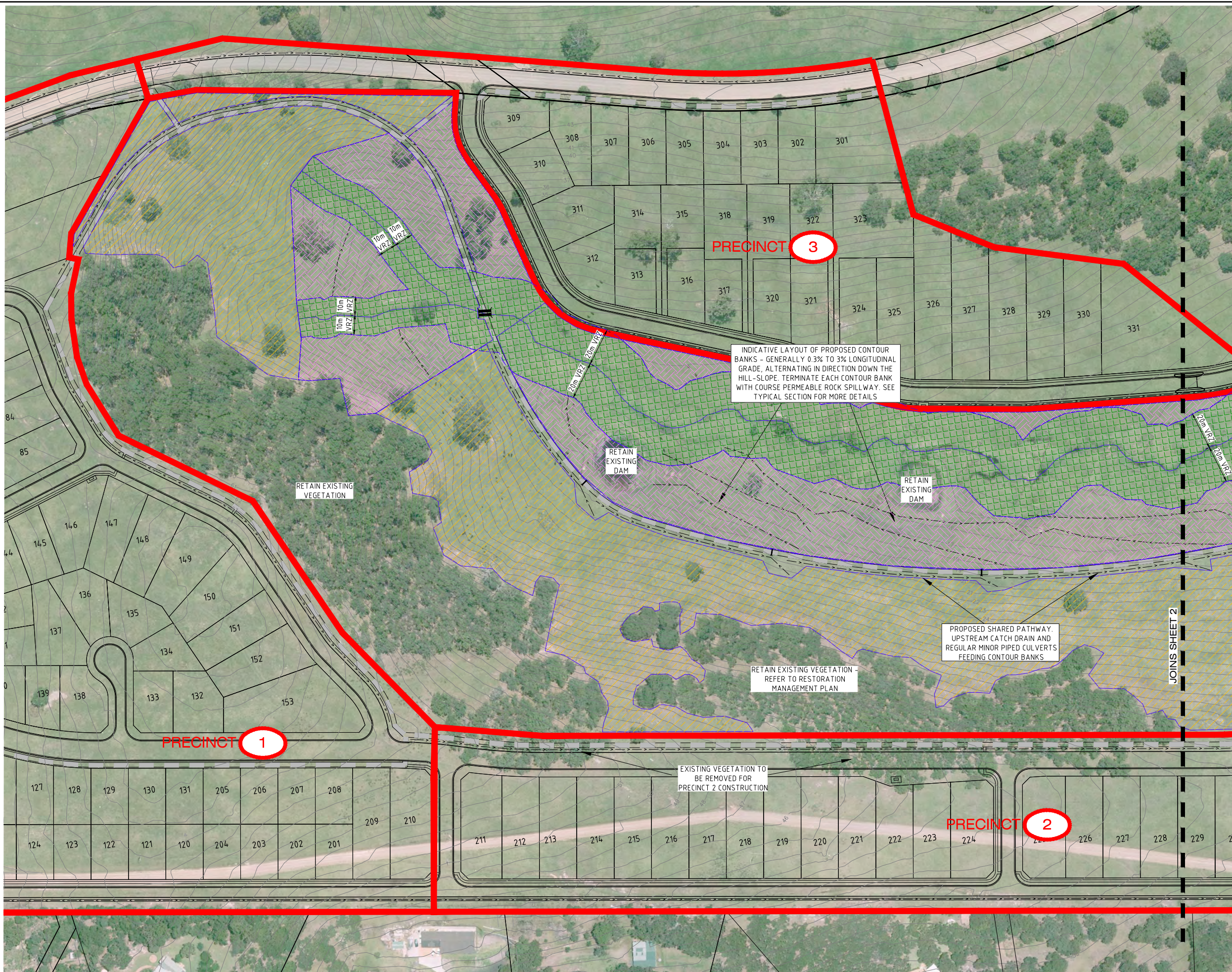


CONCEPT ELECTRICAL SERVICING PLAN

| REV                                                                | DETAILS OF AMENDMENT | DESIGNED | DRAWN | CHECKED | APPROVED | DATE     |
|--------------------------------------------------------------------|----------------------|----------|-------|---------|----------|----------|
| A                                                                  | Original Issue       | AV       | AV    | CG*     | BL*      | 18/4/18* |
| REV                                                                | DETAILS OF AMENDMENT | DESIGNED | DRAWN | CHECKED | APPROVED | DATE     |
| * Denote the original signature and date when revision was issued. |                      |          |       |         |          |          |

|                                                                                  |                         |                                    |                                                  |                     |
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| TATTERSALL LANDER Pty Ltd<br>DEVELOPMENT CONSULTANTS                             | SCALE :<br>1:6000 on A3 | SHEET No. : 32<br>JOB No. : 217416 | FILE : 21800068<br>DATE : Plotted 14:12 18/04/18 | SHEET<br>SIZE<br>A3 |
| COMPUTER FILE : S:\projects\North Shearwater\Drawings\Stg1-3 DA Design Plans.dwg |                         |                                    |                                                  |                     |





| LEGEND                     |  |
|----------------------------|--|
| REHABILITATION AREA TYPE 1 |  |
| REHABILITATION AREA TYPE 2 |  |
| REHABILITATION AREA TYPE 3 |  |

|     |                      |          |       |         |          |
|-----|----------------------|----------|-------|---------|----------|
|     |                      |          |       |         |          |
| A   | Original Issue       | AV       | AV    | BF*     | BL*      |
| REV | DETAILS OF AMENDMENT | DESIGNED | DRAWN | CHECKED | APPROVED |
|     |                      |          |       | DATE    | 18/4/18* |

\* Denote the original signature and date when revision was issued.

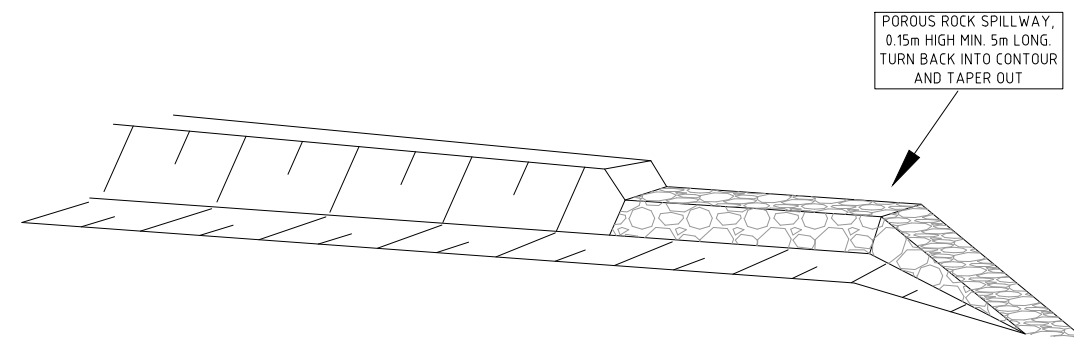
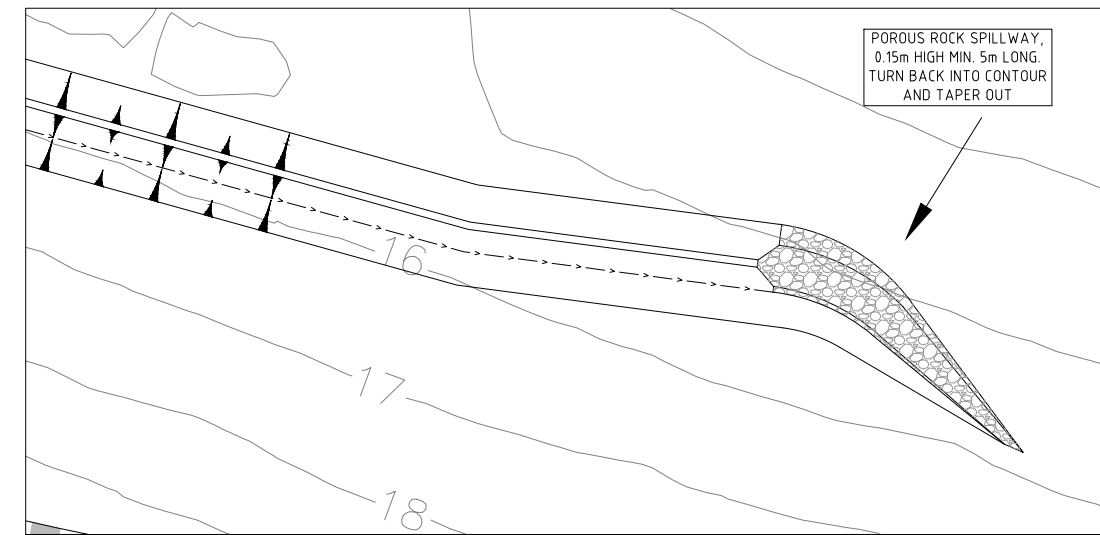
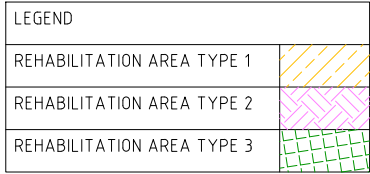
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ENGINEERING, SURVEYING & PLANNING  
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Fax (02) 49871733 Phone (02) 49871500

**PRECINCT 3 RIPARIAN CORRIDOR REHABILITATION PLAN**  
**PHYSICAL WORKS SHEET 1**  
**DURNESSE STATION**  
**VINEY CREEK RD, TEA GARDENS**

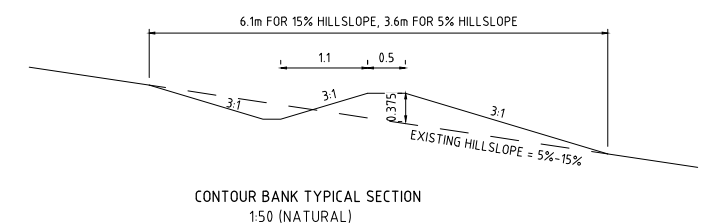
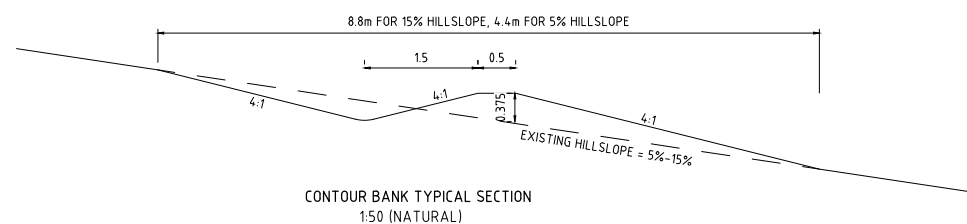
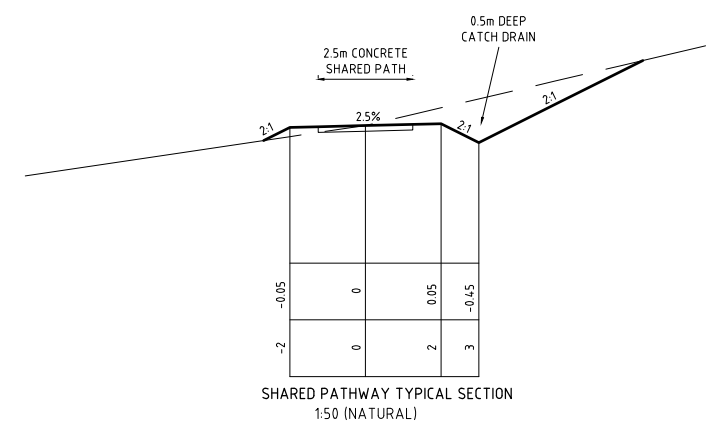
CLIENT: WOLIN INVESTMENTS    JOB No.: 205532    COMPUTER FILE : S:\projects\North Shearwater\DWG\Restoration Plans.dwg

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| PARISH                           | SHEET<br>SIZE<br>A3   |
| SCALE<br>1:2000 on A3            | SHEET No.<br>1 OF 3   |
| DATE :    Plotted 13/10/30/07/18 |                       |





- NOTES:**
1. BUILD WITH TYPICAL GRADIENTS OF 0.3%-1%
  2. AVOID REMOVING EXISTING TREES AND SHRUBS WHERE POSSIBLE
  3. PROVIDE 'ROUND' BASE, RATHER THAN SHARP V-SHAPE
  4. ENSURE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE
  5. SEED IN ACCORDANCE WITH THE 'BLUE BOOK' TO PROVIDE INITIAL SCOUR PROTECTION WHILE REGENERATION PROCEEDS



| A                                                                                                     | Original Issue       |          | AV    | AV      | B*       | BL*  | 18/4/18 |  |  |
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PRECINCT 3 RIPARIAN CORRIDOR REHABILITATION PLAN  
PHYSICAL WORKS SHEET 2  
DURNESSE STATION  
VINEY CREEK RD, TEA GARDENS

|                                      |                              |           |
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| <b>COUNCIL</b><br>MIDCOAST           | <b>REFERENCE</b><br>21800077 |           |
| <b>PARISH</b>                        | <b>SHEET<br/>SIZE</b>        | <b>A3</b> |
| <b>SCALE</b><br>1:2000 on A3         | <b>SHEET No.</b><br>2 OF 3   |           |
| <b>DATE :</b> Plotted 13:10 30/07/18 |                              |           |

| LEGEND                     |                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------|
| REHABILITATION AREA TYPE 1 |  |
| REHABILITATION AREA TYPE 2 |  |
| REHABILITATION AREA TYPE 3 |  |

| PLANTING SCHEDULE AREA TYPE 1                |            |
|----------------------------------------------|------------|
| UPPER STRATUM                                |            |
| SPECIES                                      | DENSITY/ha |
| Corymbia maculata (Spotted Gum)              | 30         |
| Eucalyptus siderophloia (Grey Ironbark)      | 50         |
| Eucalyptus canaliculata (Grey Gum)           | 50         |
| Eucalyptus tereticornis (Forest Red Gum)     | 60         |
| Corymbia gummifera (Red Bloodwood)           | 25         |
| MIDDLE STRATUM                               |            |
| SPECIES                                      | DENSITY/ha |
| Acacia myrtifolia (Myrtle Wattle)            | 20         |
| Acacia ulicifolia (Prickly Moses)            | 20         |
| Pultenaea retusa (Notched Bush-pea)          | 25         |
| Pultenaea villosa (Hairy Bush-pea)           | 35         |
| Xanthorrhoea macronema                       | 20         |
| Macrozamia communis (Burrawang)              | 10         |
| Hibbertia diffusa (Wedge Guinea Flower)      | 20         |
| Hibbertia linearis                           | 30         |
| Leucopogon juniperinus (Prickly Beard-heath) | 30         |
| PROSTRATE (LOWER) STRATUM                    |            |
| SPECIES                                      | DENSITY/ha |
| Dianella caerulea var. producta              | 100        |
| Imperata cylindrica (Blady Grass)            | 100        |
| Lomandra filiformis (Wattle Mat-rush)        | 80         |
| Lomandra longifolia (Spiney-headed Mat-rush) | 20         |
| Lomandra multiflora (Many-flowered Mat-rush) | 40         |

| PLANTING SCHEDULE AREA TYPE 2                |            |
|----------------------------------------------|------------|
| UPPER STRATUM                                |            |
| SPECIES                                      | DENSITY/ha |
| Corymbia maculata (Spotted Gum)              | 15         |
| Eucalyptus siderophloia (Grey Ironbark)      | 30         |
| Eucalyptus canaliculata (Grey Gum)           | 20         |
| Eucalyptus tereticornis (Forest Red Gum)     | 40         |
| Eucalyptus robusta (Swamp Mahogany)          | 40         |
| Eucalyptus acmenoides (White Mahogany)       | 20         |
| Corymbia gummifera (Red Bloodwood)           | 25         |
| Angophora costata (Sydney Reg-gum)           | 20         |
| MIDDLE STRATUM                               |            |
| SPECIES                                      | DENSITY/ha |
| Acacia myrtifolia (Myrtle Wattle)            | 20         |
| Acacia ulicifolia (Prickly Moses)            | 25         |
| Pultenaea retusa (Notched Bush-pea)          | 30         |
| Pultenaea villosa (Hairy Bush-pea)           | 20         |
| Glochidion ferdinandi (Cheese tree)          | 20         |
| Leucopogon juniperinus (Prickly Beard-heath) | 20         |
| Macrozamia communis (Burrawang)              | 10         |
| Hibbertia diffusa (Wedge Guinea Flower)      | 10         |
| Hibbertia linearis                           | 30         |
| Callistemon salignus (willow Bottlebrush)    | 20         |
| Callistemon rigidus (Stiff Bottlebrush)      | 20         |
| PROSTRATE (LOWER) STRATUM                    |            |
| SPECIES                                      | DENSITY/ha |
| Dianella caerulea var. producta              | 50         |
| Imperata cylindrica (Blady Grass)            | 40         |
| Lomandra filiformis (Wattle Mat-rush)        | 80         |
| Lomandra longifolia (Spiney-headed Mat-rush) | 30         |
| Lomandra multiflora (Many-flowered Mat-rush) | 30         |
| Poa labillardierei (Tussock Grass)           | 30         |

| PLANTING SCHEDULE AREA TYPE 3                  |            |
|------------------------------------------------|------------|
| UPPER STRATUM                                  |            |
| SPECIES                                        | DENSITY/ha |
| Archontophoenix cunninghamiana (Bangalow Palm) | 15         |
| Eucalyptus siderophloia (Grey Ironbark)        | 30         |
| Eucalyptus canaliculata (Grey Gum)             | 20         |
| Eucalyptus microcorys (Tallowwood)             | 40         |
| Eucalyptus robusta (Swamp Mahogany)            | 40         |
| Eucalyptus acmenoides (White Mahogany)         | 20         |
| Corymbia gummifera (Red Bloodwood)             | 25         |
| Angophora costata (Sydney Reg-gum)             | 20         |
| MIDDLE STRATUM                                 |            |
| SPECIES                                        | DENSITY/ha |
| Acacia myrtifolia (Myrtle Wattle)              | 20         |
| Acacia ulicifolia (Prickly Moses)              | 25         |
| Pultenaea retusa (Notched Bush-pea)            | 30         |
| Glochidion ferdinandi (Cheese tree)            | 20         |
| Macrozamia communis (Burrawang)                | 20         |
| Hibbertia linearis                             | 30         |
| Callistemon salignus (willow Bottlebrush)      | 20         |
| Callistemon rigidus (Stiff Bottlebrush)        | 20         |
| PROSTRATE (LOWER) STRATUM                      |            |
| SPECIES                                        | DENSITY/ha |
| Gahnia sieberiana (Red-fruit saw sedge)        | 50         |
| Lomandra longifolia (Spiney-headed Mat-rush)   | 30         |
| Lomandra multiflora (Many-flowered Mat-rush)   | 30         |
| Poa labillardierei (Tussock Grass)             | 30         |

NOTES  
- PLANTS MAY BE TUBE STOCK OR LARGER,  
DEPENDING UPON AVAILABILITY.

|                                                                    |                      |          |       |         |          |          |  |
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|                                                                                                                                                                                                                                                   | VINEY CREEK RD, TEA GARDENS |  |                 | PARISH                        |                                                                        | SHEET<br>SIZE         |  | A3 |
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## Appendix V

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### Archaeological Report for North Shearwater



# Report

## North Shearwater Estate PAD Test Excavation

Archaeological Report

Wolin Investments Pty Ltd

5 February, 2020

Rev 4 (Final)



## Report Details

### North Shearwater Estate PAD Test Excavation - Archaeological Report

Job #: J0190046, Folder #: F15963, Revision: 4 (Final), Date: 5 February, 2020

Filename: 15963 TL Shearwater Archaeological Report Rev4.docx

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## History

| Date              | Revision | Comments                                             |
|-------------------|----------|------------------------------------------------------|
| 7 November, 2019  | 1        | Draft                                                |
| 29 November, 2019 | 2        | Revised Draft                                        |
| 5 December, 2019  | 2c       | Revised Draft                                        |
| 10 December, 2019 | 2e       | Draft Issued for Critical Review                     |
| 17 December, 2019 | 2f       | Draft Issued for Critical Review                     |
| 6 January, 2020   | 3        | Draft Issue for registered Aboriginal Parties Review |
| 5 February, 2020  | 4        | Issued                                               |

## Endorsements

| Function                                       | Signature                                                                           | Name and Title                                  | Date             |
|------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------|------------------|
| Prepared by                                    |  | Jake Brown<br>Archaeologist                     | 5 February, 2020 |
| Checked by and<br>Authorised for<br>Release by |  | Dr Rod Bennison<br>Lead Environmental Scientist | 5 February, 2020 |

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## EXECUTIVE SUMMARY

Advitech Pty Limited (trading as Advitech Environmental) was engaged by Tattersall Lander on behalf of Wolin Investments Pty Ltd to undertake archaeological test excavations of the previously identified Western PAD within North Shearwater Residential Estate at Tea Gardens. Consisting of Five Stages, this assessment relates to Stages One to Four and the Rehabilitation Area.

The environmental context of the study area indicates that the most likely past Aboriginal land use would have been opportunistic hunting and gathering. Nearby water sources may have been able to provide access to flora and fauna, as well as potential for drinking water, if the salinity was not too high. The topography provides opportunity for ridge lines and crests. However, the contours indicate that a 10 to 60m rise (east to west) exists and this may exceed an ideal slope for occupation or artefact finds. The landscape also represents modern pastoral practices and infrastructure demands such as dams, roads, and powerlines.

The background environmental and archaeological contexts, provide an outline of previous Aboriginal use. Use of the project area can be confirmed through artefact and PAD locations closer to the Myall River. The land has had extensive clearing and been subject to agricultural use since the mid 1820s. This has significantly reduced the potential for Aboriginal heritage to be evident on the surface through Stages One to Three and the rehabilitation area, unlike Stage Four where artefacts are more likely to be found due to sandy soils that have been less disturbed. Stage One has potential for subsurface deposits based on past research of the area. However, unlike Stages Four and Five, the areas under assessment have a greater elevation and may have reduced potential given the shallower nature of the soils.

Based on the environmental and archaeological background research, as well as the AHIMS results, a predictive model was developed:

- A preference for sites within 50 metres of reliable water sources or a confluence of water sources, on ridge lines, spurs and on crests. There is an elevated position located within the study area and hydrolines are present in the study area;
- Previous finds in the area where ground disturbance has occurred, and the potential PADs indicate a likelihood for subsurface material;
- Sites/artefacts are more likely to be found on landforms with a slope no greater than 30 degrees, except where sandstone bedrock or limestone outcrops are present;
- Higher density of artefacts is likely to occur in stage four (outside the current study area); and
- Based on previous surveys the likely majority of finds will be flakes, flaked pieces and debitage.

The test excavation consisted of a total of 10 test pits. The test excavation did not exceed 30 cm as no cultural inclusions were located. The soil profile and rock inclusions would have made penetration of artefacts below the excavated level difficult. Additional surface material finds within the original PAD area represented subsurface material in the main excavation area. The results of the test excavation and previous assessments determined that the location has no potential for archaeological deposits.

The previously identified PADs are not sites and as such there are no impacts to the archaeological record and the following recommendations are provided:

1. The persons responsible for the management of onsite works will ensure that all staff, contractors and others involved in construction and maintenance related activities are made aware of the statutory legislation protecting sites and places of significance. Of particular

importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974;

2. Should any Aboriginal objects be uncovered during works, activities should halt in that location and the Environmental Line contacted on 131 555 to report the discovery; and
3. AHIMS will be updated.

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## APPENDICES

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Test Excavation Notification

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Test Excavation Photographs

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Aboriginal Site Impact Recording Form (ASIRF)

## 1. INTRODUCTION

Advitech Pty Limited (trading as Advitech Environmental) was engaged by Tattersall Lander on behalf of Wolin Investments Pty Ltd to undertake archaeological test excavations of the Western PAD identified within the North Shearwater Residential Estate at Tea Gardens. The project is a Five Staged Development including Stage one to Five and a designated rehabilitation area. This assessment relates to the PAD identified in Stage One.

It should be noted that this report was prepared by Advitech Pty Limited for Wolin Investments Pty Ltd ('the customer') in accordance with the scope of work and specific requirements agreed between Advitech and the customer. This report was prepared with background information, terms of reference and assumptions agreed with the customer. The report is not intended for use by any other individual or organisation and as such, Advitech will not accept liability for use of the information contained in this report, other than that which was intended at the time of writing.

### 1.1 Proponent details

Wolin Investments Pty Ltd

### 1.2 Proposed Development

The North Shearwater Residential Estate is located approximately 4 kms north of Tea Gardens, 48 kms north-east of Newcastle. The development is divided into five stages and a designated rehabilitation area. Stages One to Three and the rehabilitation area are currently under development, and Stages Four and Five are planned future works. Further details of the development are provided in **Section 2**.

### 1.3 Purpose of Assessment

The purpose of the assessment is to assess any archaeological constraints to support the subdivision and to provide opportunities and options to ensure any cultural materials present are protected through their salvage through an Aboriginal Heritage Impact Permit (AHIP).

### 1.4 Scope of Works

The archaeological assessment described in this report involved the following activities:

- a review of relevant statutory registers and inventories for indigenous cultural heritage including the NSW Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management System (AHIMS) for known archaeological sites, the State Heritage Register, the Australian Heritage Database (includes data from the World Heritage List UNESCO, National Heritage List, Commonwealth Heritage List, Register of the National Estate) and the Great Lakes Local Environmental Plan 2014;
- a review of local environmental information (topographic, geological, soil, geomorphological and vegetation descriptions) to determine the likelihood of archaeological sites and specific site types, prior and existing land uses and site disturbance that may affect site integrity;
- a review of previous cultural heritage investigations to determine the extent of archaeological investigations in the area and any archaeological patterns;
- the development of a predictive archaeological statement based on the data searches and literature review;
- identification of human and natural impacts in relation to the known and any new archaeological sites archaeological potential of the project area;

- consultation with the Aboriginal stakeholders as per the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010a);
- undertake a test excavation as per the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (2010b), with the participation of registered Aboriginal stakeholders; and
- the development of mitigation and conservation measures in consultation with the registered Aboriginal stakeholders.

## 1.5 Investigators and Contributors

Jake Brown, Archaeologist, has three years of experience in Aboriginal archaeological assessments, research, reporting, analysis and consultation. This experience has included cataloguing stone artefacts from the Hunter region, conducting field surveys, and monitoring of potential find sites during surface/subsurface disturbance across central and northern Queensland. Jake's educational qualifications include a Bachelor of Social Science (Hons) in Sociology and Anthropology, University of Newcastle 2015, and a Graduate Certificate of Archaeology from Flinders University 2017. Jake is a member of the Australian Archaeological Association. Jake Brown prepared the report, participated in the field activities and community consultation.

Jessica Blackman, Archaeologist, has six years of experience in Aboriginal archaeological assessment, cultural heritage management, reporting, analysis, and community consultation. Jessica's training in the mining and minerals industry has allowed her to gain extensive experience in field heritage survey and assessment, artefact and cultural site identification and cataloguing, and land access facilitation through meeting internal and regulatory compliance obligations. Jessica has worked in Queensland, New South Wales and the Northern Territory. She holds a Bachelor of Arts with an extended major in archaeology and anthropology (University of Queensland 2011) and a Native Title Masterclass Certificate (James Cook University 2015). Jessica is a member of the Australian Archaeological Association (AAA), the Australian Society for Historical Archaeology (ASHA), The Lithics Studies Society and the World Archaeological Congress. Jessica Blackman participated in the field activities, review of the initial report and community consultation.

Dr Penny McCardle is an archaeologist qualified in both indigenous archaeology (20 years) and forensic anthropology (16 years). Penny has practical experience in all types of archaeological assessments ranging from small developments to large scale research/management projects and mine site investigations. She has extensive practical experience in research, survey, excavation, reporting and Aboriginal community consultation. She has an understanding of indigenous cultural heritage (including shell middens, stone tools, occupation sites, art, sacred sites, burials, mortuary practices, skeletal identification, etc.). Penny also has an understanding of archaeological theoretical and analytical issues and remains up to date with issues relating to her profession. Penny is a Forensic Anthropologist and works with the Department of Forensic Medicine Newcastle, the NSW Forensic Services Group, NSW Police and the Biodiversity and Conservation Division in regard to skeletal remains, recovery and identification (including Aboriginal and non-Aboriginal). She presents basic theories of archaeological recovery and skeletal identification to the Forensic Services Group Hunter Zone - Forensic Investigators. Penny communicates effectively with professional clients and government departments, and has a sound knowledge of the legislative process, (both State and Federal) guiding the management of indigenous places and sites of cultural importance. She has developed professional working relationships with the relevant heritage bodies, Local Aboriginal Land Councils and other Aboriginal groups throughout NSW. Dr Penny McCardle provided an in-depth critical review of the report.

Dr Rod Bennison is an environmental specialist with over 20 years of experience (over 15 in a consulting environment). Rod has diverse expertise in construction management and social research and is

responsible for managing construction projects, community liaison and public relations strategies and services, and environmental and social impact assessments. Rod manages and coordinates the provision of environmental and community relations services, including environmental planning, acoustics and air quality assessments, archaeological and ecological services. A biogeographer, ecologist and animal ethicist by profession, he is a certified Biodiversity Assessment Method Assessor (BAAS 19023) and contributes to the effective implementation of the BDAR. Dr Rod Bennison directed the project and provided general project oversight, quality assurance and financial management. He provided a review of this report and leads the environmental team at Advitech.

The Site officers were Mr David Kirk (Karuah Indigenous Corporation) and Mr John Feeney (Nur-Run-Gee). Mr Dave Feeney (Karuah Indigenous Corporation and Karuah Local Aboriginal Land Council) also participated in an onsite discussion on the Tuesday 28 May, 2019.

## 1.6 Legislation and Statutory Obligations

All work described in this report was carried out in accordance with the following legislation:

- *National Parks and Wildlife Act, 1974* (NPW Act);
- *National Parks and Wildlife Amendment Regulation, 2009* (NPW Regulation);
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010a)
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b) insofar as this relates to the assessment; and
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (DECCW 2011) insofar as this relates to the assessment.

Under the NPW Act, it is an offence to harm an Aboriginal object whether or not a person knows it is an Aboriginal object. Property owners, developers and land managers are required to consider their proposed activities, and whether any harm may occur to Aboriginal objects and places under several pieces of legislation. The NPW Act is administered by the Department of Planning, Industry and Environment (DPIE) and is the primary legislation for the protection of Aboriginal cultural heritage in New South Wales. Under Part 6 of the Act, it is an offence to knowingly harm or desecrate an Aboriginal object or Aboriginal place. If harm to an object or place is anticipated, an Aboriginal Heritage Impact Permit (AHIP) must be applied for and DPIE may issue an AHIP under s90 of the Act.

The following legislation also relates to the protection of Aboriginal Heritage:

### ***Environmental Planning and Assessment Act 1979*** (EPA Act)

The potential impacts of a development on Aboriginal heritage are a key component of the environmental impact assessment process under the EPA Act. In NSW, the EPA Act is the principal law overseeing the assessment and determination of development proposals which are considered under the Act.

### ***Heritage Act 1977 (NSW)*** (the Heritage Act)

The Heritage Act protects the natural and cultural history of NSW with emphasis on non-indigenous cultural heritage through protection provisions and the establishment of a Heritage Council. While Aboriginal heritage sites and objects are protected primarily by the NPW Act 1974, if an Aboriginal site, object or place is of great significance it can be protected by a heritage order issued by the Minister on the advice of the Heritage Council.

### ***The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (as amended 1987)*** (Commonwealth)

The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 protects areas and/or objects which are of significance to Aboriginal people and which are under threat of destruction. A significant area or object is defined as one that is of particular importance to Aboriginal people according to Aboriginal tradition.

***The Aboriginal Land Rights Act 1983*** (NSW)

The NSW Aboriginal Land Rights Act 1983 is administered by the Department of Human Services: Aboriginal Affairs NSW and establishes the NSW Aboriginal Land Council and local Aboriginal land councils. The Act requires these bodies to take action to protect the culture and heritage of Aboriginal persons in the council's area and promote awareness in the community of the culture and heritage of Aboriginal persons in the council's area.

***The Native Title Act 1993*** (Commonwealth)

The Native Title Act 1993 provides the legislative framework to recognise and protect native title, establishes ways in which future dealings affecting native title may proceed and to set standards for those dealings, including providing certain procedural rights for registered native title claimants and native title holders in relation to acts which affect native title.

***The Australian Heritage Commission Act 1975*** (Commonwealth)

The Australian Heritage Commission Act 1975 established the Australian Heritage Commission, which assesses places to be included in the National Estate and maintains a register of these places, which are significant in terms of their association with particular community or social groups for social, cultural or spiritual reasons. The Act does not include specific protective clauses.

## **1.7 Structure of the Report**

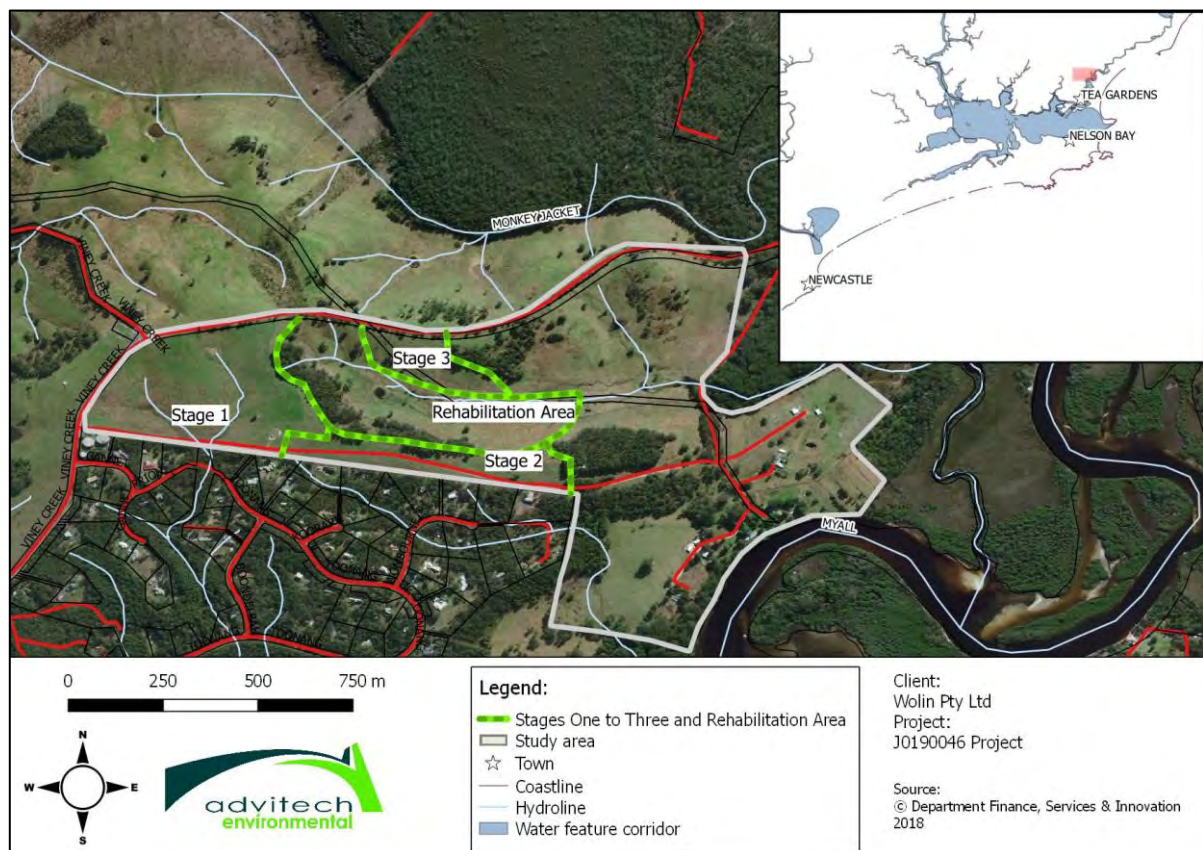
The report structure is as follows:

2. Description of the development proposal;
3. Consultation;
4. Landscape and Environmental Context;
5. Cultural Context;
6. Archaeological Context;
7. Test Excavation Methodology;
8. Test Excavation Results and Discussion;
9. Assessment of Impacts;
10. Mitigation and management strategies; and
11. Recommendations.



## 2. DESCRIPTION OF DEVELOPMENT PROPOSAL

The North Shearwater development area is located approximately 48 kms north-east of Newcastle and 4 kms north of Tea Gardens. The development has five planned stages. Stages One to Three and the Rehabilitation Area are shown in **Figure 1**,



**Figure 1: Study area location**

The approximate area of the site is 116 hectares. The land zoning indicates R2 low density, E2 environmental conservation, SP3 tourist, R3 medium density residential and RU2 rural landscape. The Durness homestead (in Stage Five of the development) is listed as locally significant in the Great Lakes Local Environmental Plan 2014 in Schedule 5 Part 1 Heritage Items.

Stages One to Three will be subject to residential subdivision as outlined in the **Figures 2, 3 and 4**. Planned activities that could harm Aboriginal objects include excavation, infrastructure projects (powerlines, roads), housing development, recreational facilities, tree removal and environmental control techniques including sediment basin.

The rehabilitation area has been provided and fulfils the requirements of the ecological sustainable principles developed by MidCoast Council. **Figures 5 and 6** show indicative plans for the rehabilitation area.



Figure 2: Tattersall Lander development map 21800038 with stage details

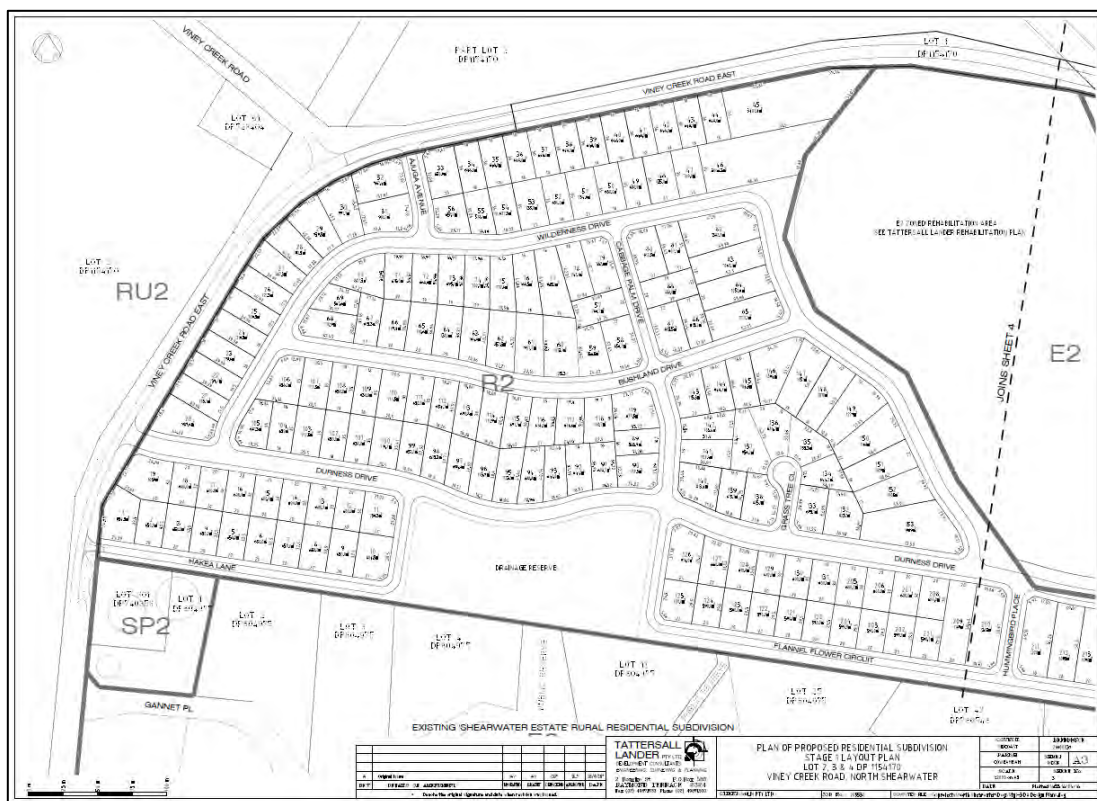


Figure 3: Tattersall Lander Plan Stages One and Two planned subdivision



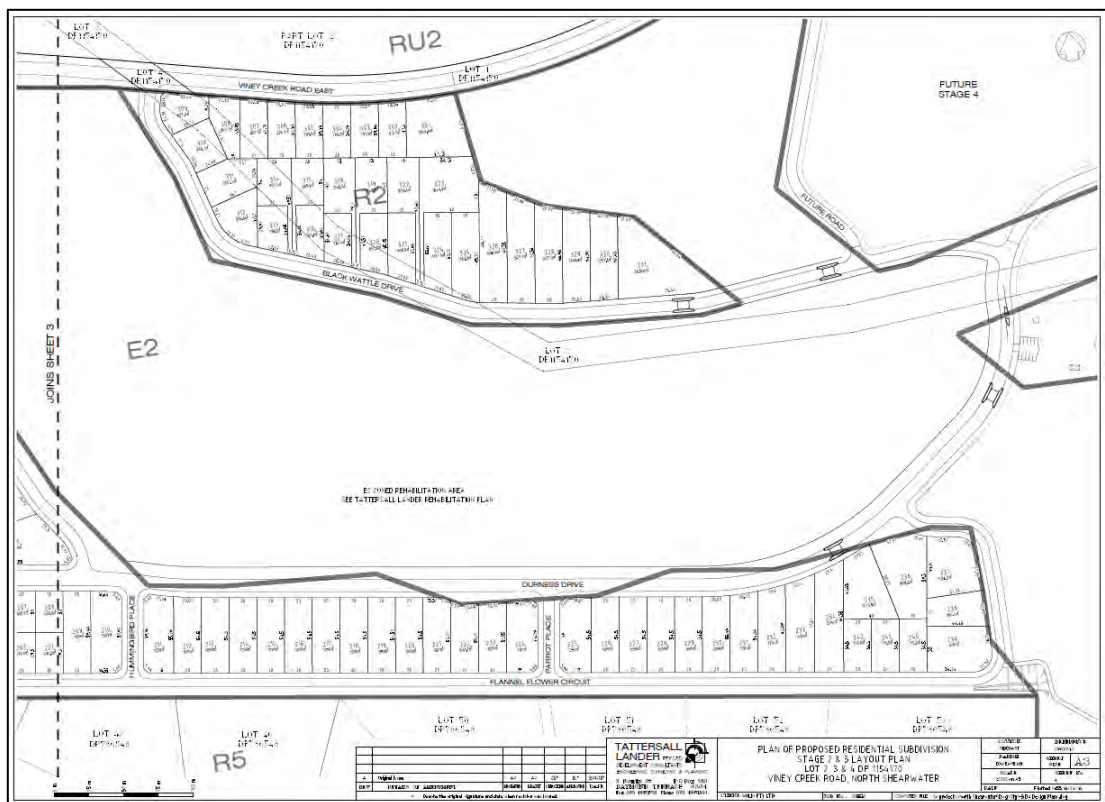


Figure 4: Tattersall Lander Plan Stages Two and Three planned subdivision

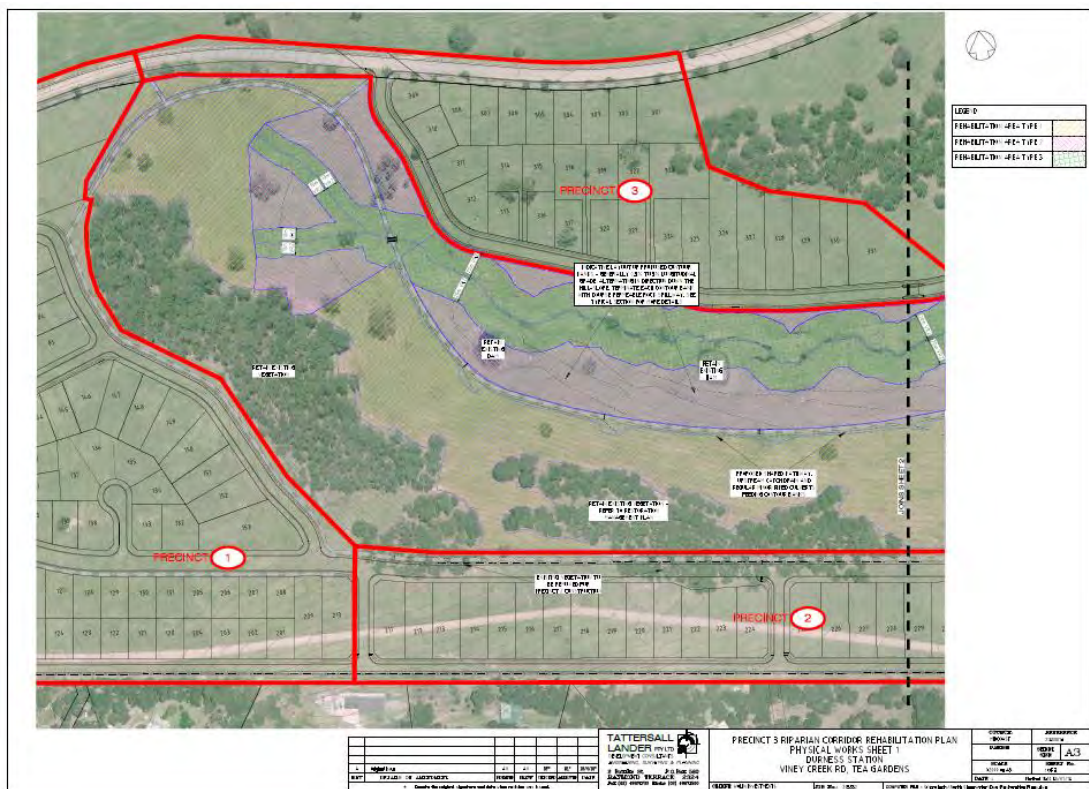
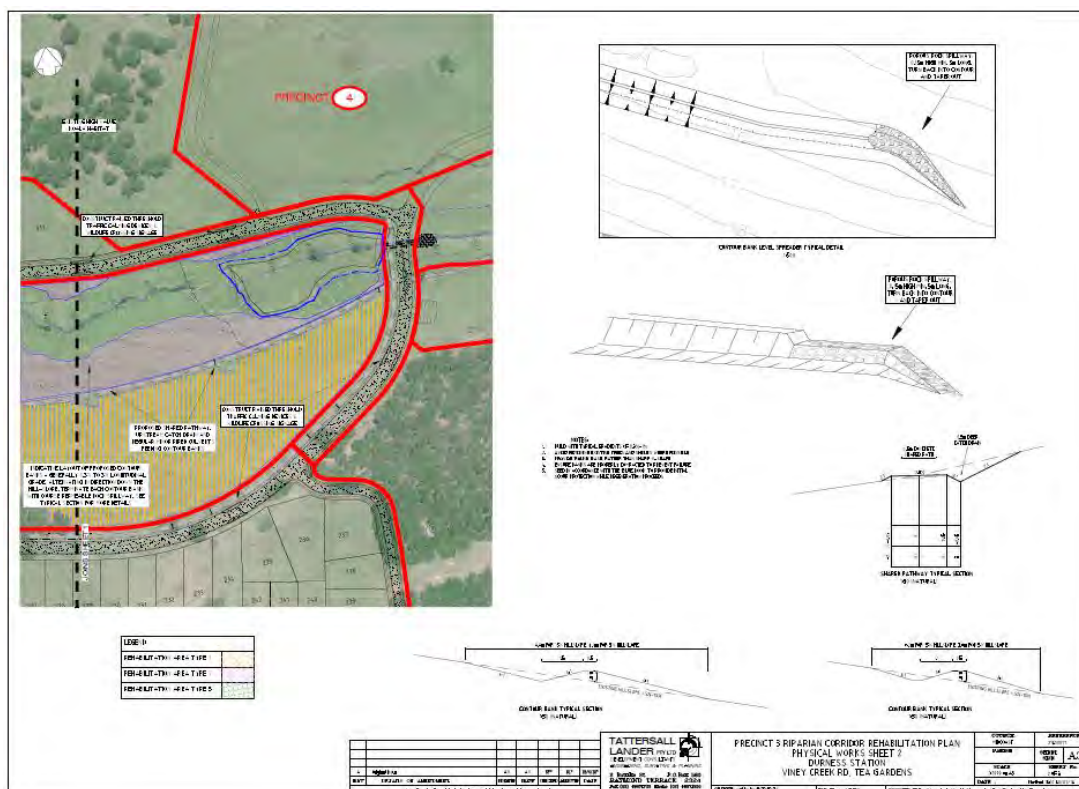


Figure 5: Tattersall Lander Indicative Plan for Rehabilitation Area page 1



### 3. CONSULTATION

As per the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010), Advitech followed the four stages of consultation as set out in Advitech (2019). All correspondence for the consultation process is provided in Advitech (2019) and **Appendix I** of this document with the test excavation notification.

#### 3.1 Test excavation

RAPs that were invited to participate in the test excavation included members that were previously involved in the investigation and another local group. Provision was made for payment of two RAP field officers were invited to participate in the test excavation that commenced on the 27 May, 2019 and participants were Mr David Kirk (Karuah Indigenous Corporation) and Mr John Feeney (Nur-Run-Gee). Mr Dave Feeney (Karuah Indigenous Corporation and Karuah Local Aboriginal Land Council) also participated in an onsite discussion on the Tuesday 28 May, 2019.

#### 3.2 Stage 4: Review of draft cultural heritage assessment

A copy of the DRAFT report was forwarded to all RAPs for their review and were asked to provide a written or verbal response no later than **4 February, 2020**. The cultural values identified in the written responses to the draft report are presented.

All comments received from the RAPs were considered in the final report, all submissions responded to were necessary and the draft report altered to include their comments. All documentation regarding the consultation process is provided in Advitech 2020.



The environmental context of the study area indicates that the most likely use would have been opportunistic hunting and gathering. The study area is located in the temperate climate zone (see **Table 1**). Nearby water sources may have been able to provide access to flora and fauna, as well as potential for drinking water, if the salinity was not too high. The Myall River (third order stream) borders the eastern and south eastern border of the lot/plan DP 1154170. Monkey Jacket Creek (second order stream) is within the eastern side of the lot; however, the development area stops approximately 150 m west of the creek.

For further details refer to the Advitech ACHA Report 2020.



**Table 1: BOM Nelson Bay climate statistics 1914-2019 (red = high / blue = low)**

| Statistic              | Jan  | Feb   | Mar   | Apr   | May   | Jun   | Jul   | Aug   | Sep  | Oct  | Nov  | Dec  | Annual |
|------------------------|------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|--------|
| Mean max temp (°C)     | 27.4 | 27    | 25.9  | 23.6  | 20.8  | 18.2  | 17.5  | 18.9  | 21.4 | 23.2 | 24.7 | 26.1 | 22.9   |
| Mean minimum temp (°C) | 19   | 19.1  | 17.8  | 15.3  | 12.4  | 10.2  | 9.1   | 9.9   | 12   | 14.1 | 16   | 17.7 | 14.4   |
| Mean rainfall (mm)     | 99.8 | 110.7 | 117.5 | 129.4 | 150.2 | 157.9 | 137.5 | 101.7 | 89   | 78.1 | 80.2 | 92.8 | 1341.9 |

The environmental context of the study area indicates that the most likely use would have been opportunistic hunting and gathering. Nearby water sources may have been able to provide access to flora and fauna, as well as potential for drinking water, if the salinity was not too high. The topography provides opportunity for ridge lines and crests. However, the contours indicate that a 10 to 60m rise (east to west) exists and this may exceed an ideal slope for occupation or artefact finds. The landscape also represents modern pastoral practices and infrastructure demands such as dams, roads, and powerlines.

## 5. CULTURAL CONTEXT

### 5.1 The Landscape and Cultural Heritage

The following is extracted from 'What is an Aboriginal Cultural Landscape?' (DECCW 2010):

*All landscapes contain evidence of human use. The way that perceptions, beliefs, stories, experiences and practices give shape, form and meaning to a landscape is termed a cultural landscape (ACH 1998). An Aboriginal cultural landscape is 'a place or area valued by an Aboriginal group (or groups) because of their long and complex relationship with that land. It expresses their unity with the natural and spiritual environment and embodies their traditional knowledge of spirits, places, land uses, and ecology. Material remains of the association may be prominent but will often be minimal or absent.*

*The landscape scale of cultural heritage is similar to the concept of 'whole-of-landscape' in ecosystem conservation - just as there is connectivity between all parts of natural ecosystems (e.g. plants, animals, soils and water) there is connectivity between cultural objects and places through past human behaviour patterns. The cultural landscape concept emphasises the landscape-scale of history and the connectivity between people, places and heritage items. It recognises that the present landscape is the product of long-term and complex relationships between people and the environment.*

*Aboriginal cultural landscapes are comprised of:*

*Significant biodiversity and a diverse range of ecological systems and associations, all of which contributed to the continuing existence of Aboriginal peoples in the region over many thousands of years, and which are valued in different ways by Aboriginal communities today;*

- *Material remains of this continuing occupation in the form of a diverse array of Aboriginal sites and places known to the Aboriginal communities, some of which will be recorded on the Department of Environment, Climate Change and Water's Aboriginal Heritage Information Management System.*
- *Extensive historical records from 1788 through to today which record observations of Aboriginal people and lifestyles, wars, massacres, social and cultural events, population census, social interactions, language etc, and which influence Aboriginal community values today.*
- *An Aboriginal population made up of people who have traditional association and knowledge of the region, as well as others who live, work and play within the region, all of whom may attribute various values with the area, derived from the distant and recent past, through to the present day.*

*For Aboriginal people, the significance of individual landscape features is derived from their inter-relatedness within the cultural landscape. This means features cannot be assessed in isolation and any assessment must consider the feature and its associations in a holistic manner. This may require a range of assessment methods and will always require the close involvement and participation of Aboriginal people. By consulting with Aboriginal people and using the concept of cultural landscapes, the story behind the features can be told which demonstrates the associations that may exist between Aboriginal objects and other features within the landscape (DECCW 2010).*

### 5.2 Cultural Context

Since colonisation, records of interactions and Aboriginal culture have been documented. Early explorers such as Charles Grimes noted physical and language differences to the Sydney Aboriginals

when he visited in 1795 (Port Stephens Council, n.d.). Other early records of the Worimi include Richard Dawson between 1826 to 1828 and William Scott in the 1850s (Dyall 2004, p. 4). The Worimi were recorded as having a number of tribes according to Enright (1900) and Sokoloff (1976) which include:

- Garuagal;
- Maiangal;
- Gamipingal;
- Garrawerrigal;
- Buraigal;
- Warringal;
- Birroongal;
- Birrimbai;
- Yeerungal; and
- Wallamba.

Other earlier sources include Enright (1899, 1900 and 1932) who recorded language, tools and cultural events such as initiation ceremonies in Port Stephens. Sokoloff (1976) details social and ceremonial aspects of the Worimi at Port Stephens which included dispute resolution, totems and marriage practices. Elkin (1932) also discusses language, totems and social organisation of the Worimi as well as including a brief description of the Worimi area which stretch to Maitland through Stroud and to the Pacific Ocean near tea Gardens. Brayshaw (1987) also provided a source on the Worimi people and other groups in the Hunter region documenting environmental use, cultural and dietary practices. Brayshaw (1987, pp. 40-41) also noted that the Worimi had frequently associated with the Awabakal to south and shared a language with the Gringai (west) and Birpai (north).



## 6. ARCHAEOLOGICAL CONTEXT

A detailed archaeological review has been provided in Advitech (2019) and as such a summary is provided here.

### 6.1 AHIMS Sites

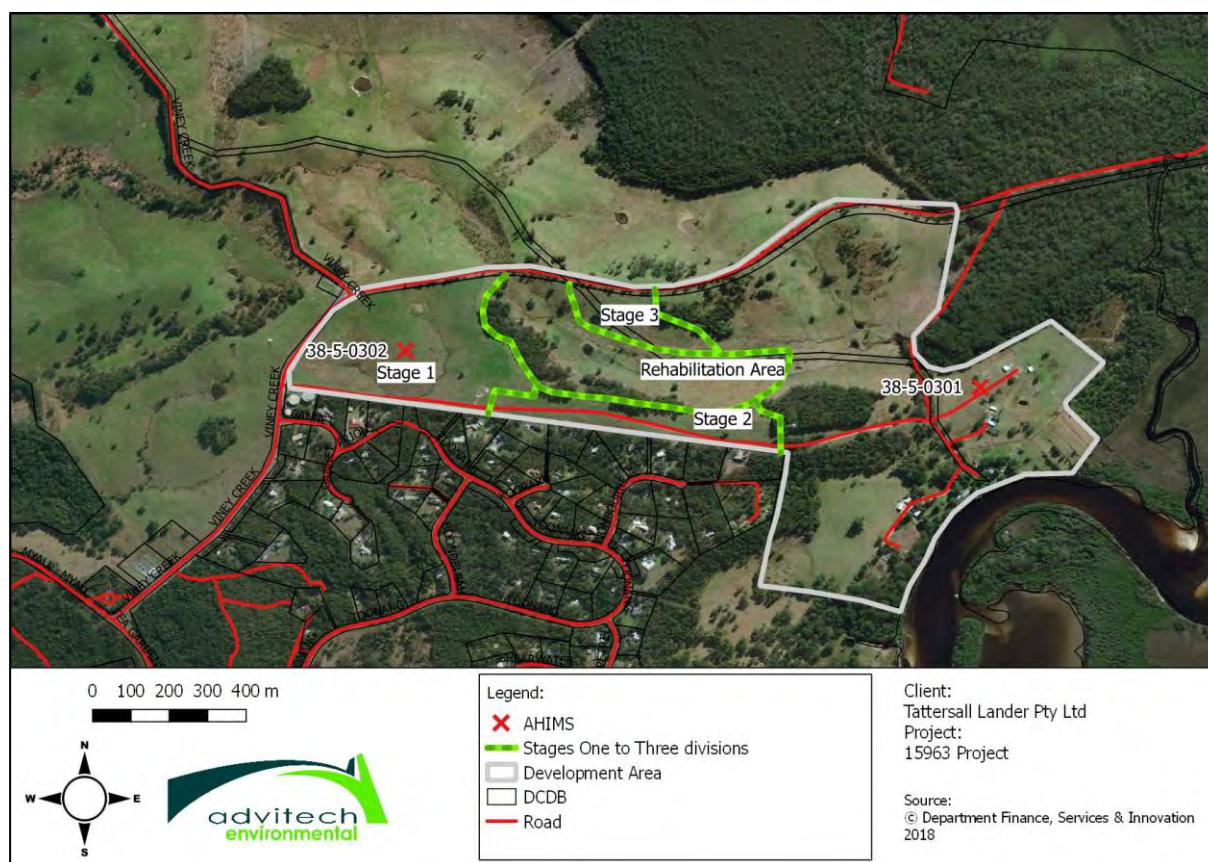
An Aboriginal Heritage Information Management System (AHIMS) extensive search of the development area was conducted on 14 September 2018 with a buffer of 200 metres. Two Aboriginal sites were found to be within 200 metres the planned development area.

The results of the search are noted in **Table 2** below. The locations of all registered sites noted in this search are provided in **Figure 8**. **Figure 8 is not for public disclosure and should be removed prior to any further publication of this assessment.** The two potential archaeological deposits were recorded from the Insite (2009) survey. The site IDs are 38-5-0301 for PAD 1 and 38-5-0302 for PAD 2.

**Table 2: AHIMS Sites within 1000 m of development area**

| NPW Site No. | Site Name        | Site Description                 |
|--------------|------------------|----------------------------------|
| 38-5-0301    | Shearwater PAD 1 | Potential Archaeological Deposit |
| 38-5-0302    | Shearwater PAD 2 | Potential Archaeological Deposit |

As well as the two previously recorded sites, two additional sites, a PAD and an isolated artefact, were recorded during the 2018 due diligence inspection and subsequently were submitted onto the AHIMS.



**Figure 8: AHIMS search results and sites lodged (NOT FOR PUBLIC DISCLOSURE)**



## 6.2 Archaeological Context

The regional archaeological context is provided by previous assessments that have tended to focus near the coast or prominent body of water (Pacific Ocean, Myall Lakes and Myall River). The most common finds reported were middens with stone artefacts, a modified tree and open campsite also documented. Due to the regional coastal influence middens have been documented at a number of sites, as close as 1.5 km from the study area (ARC 2004; ERM 2011, 2011; KLALC 2018; MCH 2015; MCAS 2016; RPS 2017; Dyll 1982; Silcox 1999; Brayshaw 1988; Dallas 1982; Villiers 1981). The regional pattern also present stone artefacts and open campsites as examples of evidence of human occupation. It can be predicted from the previous assessments that early regional occupation was strongly connected to waterways and coastal areas.

Based on the previous assessments and AHIMS results, a predictive model for the project area has been developed:

- A preference for sites within 50 metres of reliable water sources or a confluence of water sources, on ridge lines, spurs and on crests. There is an elevated position located within the study area and hydro lines are present in the study area;
- Previous finds in the area where ground disturbance has occurred, and the potential PADs indicate a likelihood for subsurface material;
- Sites/artefacts are more likely to be found on landforms with a slope no greater than 30 degrees, except where sandstone bedrock or limestone outcrops are present;
- Higher density of artefacts is likely to occur in stage four (outside the current study area); and
- Based on previous surveys the likely majority of finds will be flakes, flaked pieces anddebitage.

## 6.3 Previous Assessments and sites in the project area

Previous assessments across the project area (Insite Heritage 2009; AMBS 2009; AMBS 2010; Advitech 2018, 2019) identified four sites consisting of three PADs and one artefact site. Three PADs have been identified and include the eastern side of the property which has Holocene sands and have the potential to include subsurface deposits. This was originally one PAD with which was refined in 2009 by AMBS. The northern PAD (38-5-0349) was a moderate exposed section of sandy soil with one artefact exposed. This is not in the current assessment area. The artefacts in 38-5-0348 is approximately 70m south of 38-5-0349. The location of the sites and PADs are provided in **Figure 9**.

**Table 3: Site Location Table (NOT FOR PUBLIC DISCLOSURE)**

| Name      | Site Type                        | Easting | Northing |
|-----------|----------------------------------|---------|----------|
| 38-5-0348 | Artefacts                        | 421924  | 6389449  |
| 38-5-0349 | Potential Archaeological Deposit | 421936  | 6389524  |

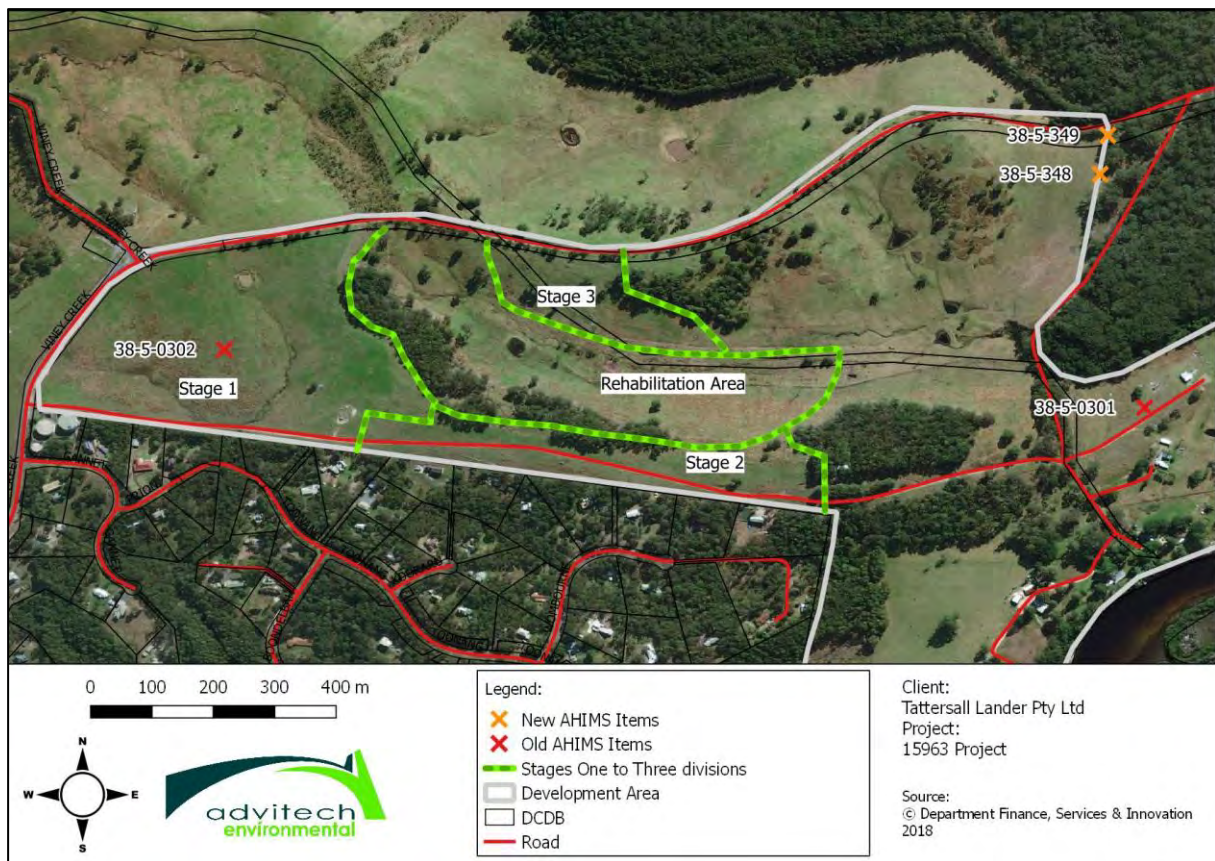


Figure 9: Additional AHIMS from Advitech Survey

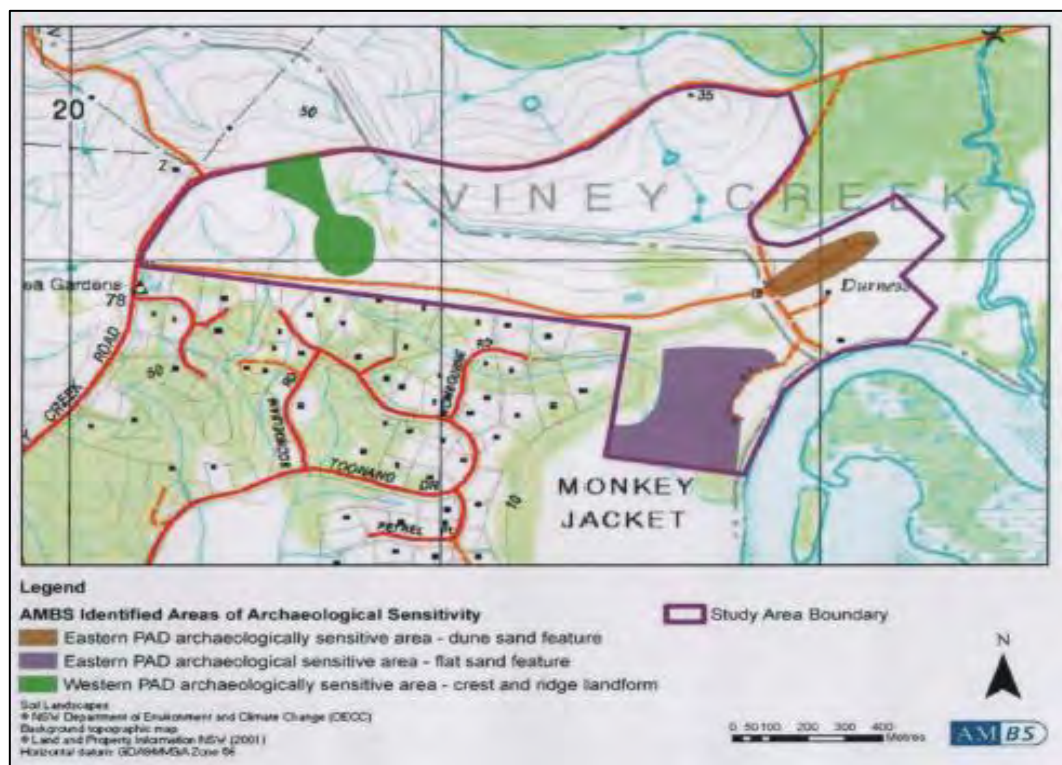


Figure 10: AMBS (2009) redefined PADs





Figure 11: Artefact found at PAD located in Stage Four of the development 3 December 2018



Figure 12: Artefact located in Stage Four of the development 3 December 2018



Figure 13: Artefact located in Stage Four of the development 3 December 2018



## 7. TEST EXCAVATION METHODOLOGY

### 7.1 Objectives

The purpose of archaeological test excavation was to collect information regarding the nature and extent of sub-surface Aboriginal objects, based on the sample obtained from these sub-surface investigations. The test excavation will contribute to the understanding of site characteristics and local and regional prehistory and was used to inform conservation goals and harm mitigation measures for the proposed activity. The test excavation also determined if an Aboriginal Heritage Impact Permit (AHIP) is required and what type of controlled salvage works may be required, if necessary, under the AHIP.

### 7.2 Date of Commencement and Completion

The test excavation took place on 27 and 28 May 2019.

### 7.3 Location of Temporary Storage of Cultural Materials

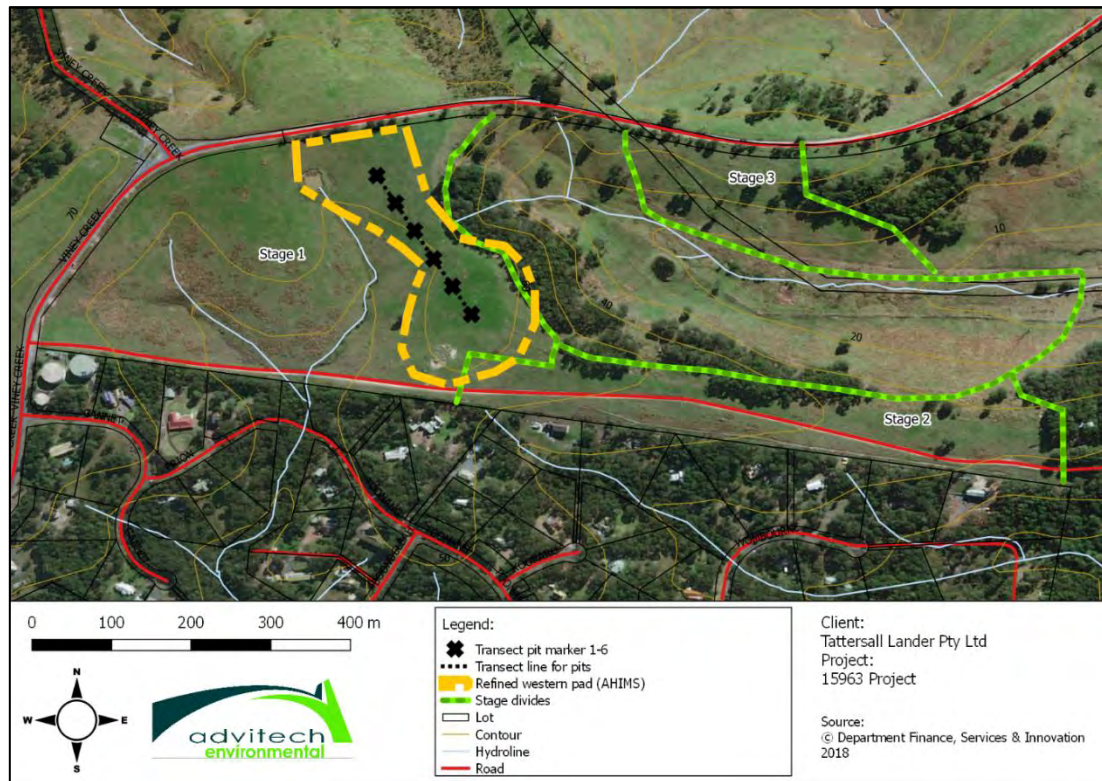
If any cultural material was located, it was to be reburied on site following Requirement 26 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*.

### 7.4 Excavation Methods

The test excavation was conducted as per requirement 16a of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* which has the following requirements:

- Test excavations must be excavated using hand tools only;
- The first excavation unit must be excavated and documented in 5 cm spits at each area being (site) investigated. Based on the evidence of the first excavation unit, 10 cm spits or sediment profile/stratigraphic excavation (whichever is smaller) may then be implemented;
- All material excavated from the test excavation units must be sieved using 5 mm aperture wire-mesh sieve;
- Test excavation units must be excavated to at least the base of the identified Aboriginal-bearing units and must continue to confirm the soils below are culturally sterile;
- Photographic and scale-drawn records of the stratigraphy/soil profile, features and information must be made for each single excavation point;
- Test excavation units must be backfilled as soon as possible;
- Following test excavation, an Aboriginal Site Impact Recording form must be completed and submitted to the AHIMS Registrar as soon as practicable, for each AHIMS site that has been subject to test excavation in accordance with the requirements of this Code; and
- Objects revealed during the test excavation will be reburied in a temporary storage location pending long-term management of the salvaged Aboriginal objects. The location and updated site card will be submitted to AHIMS.





**Figure 14: Predicted locations of six test pits in Stage One**

Recording of any finds was to follow the *Guide to Completing AHIMS Site Recording Forms* (OEH 2012). For the five most common sites (artefacts, modified trees, grinding grooves, art and shell) typical features to be recorded included the following:

- Condition;
- Material;
- Type;
- Length;
- Width;
- Depth;
- Termination;
- Platform; and
- Stratification and density.

Other items which could generally be discovered through excavation include a hearth, charcoal, evidence of heat treatment and bone.

## 7.5 Research Questions

The research questions for the test excavation are as follows:

1. Does the registered area meet the requirements for a Potential Archaeological Deposit?
2. Are items found during previous surveys connected to the PAD?
3. What impact has the geological testing had on the archaeological record?

## 8. TEST EXCAVATION RESULTS AND DISCUSSION

The results of the test excavation, the analysis and discussion of these results are presented in this Section and the data provided in **Appendix II** and **III**. A total of 10 test pits were excavated and their location shown in **Figure 15**. It is noted that test pits 5 and 6 were relocated west of their proposed positions due to rocky ground which would not allow for test excavation.



Figure 15: Test Pit locations

### 8.1 Disturbances

A number of land use patterns have occurred in the North Shearwater area in the past. Recent disturbances since colonisation have included agricultural practices such as land clearing and stock rearing. During the test excavation, four bullock were present and represent continual pastoral use since the 1820s. As part of the development program in the last ten years, the site has had a number of geotechnical testing regimes. Together, these represent modern disturbances that have may disturbed the archaeological record. The terrain has also been altered with a dam, a road, power lines and small borrow pit/rock pile. Bioturbation appears to have also disturbed the deposits as evidenced through the presence of ants, spiders and other insects as well as small to moderate sized rocks and rubble of varying densities throughout the deposit that increased in size and density with depth.

## 8.2 Soil Profile and Stratigraphy

The soil and stratigraphy were consistent across the ten test pits and consisted of an A Horizon that consisted of black soil ranging in the Munsell chart from 2.5 YR to 2.5 Y and Ph of between 6.8 and 7.6. The inclusions were predominantly rock (sandstone) ranging from gravel to large rocks. Other inclusions were organic material originating from the grass cover and insects. **Table 5** provides a summary of the test pits and **Figure 16** a representation of the stratigraphy.

**Table 4: Test Excavation Results**

| Test pit | Spit Depth                            | Soil Description                                                              | Munsell Chart       | Inclusions                                                                                       | Finds |
|----------|---------------------------------------|-------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------|-------|
| TP1      | 5 cm                                  | Black Soil under grass/vegetation layer                                       | Black 2.5YR to 2.5Y | Organic material - roots, insects                                                                | No    |
|          | 10 cm                                 | Black soil, slightly more compact                                             | Black 2.5YR to 2.5Y | Gravel/stone                                                                                     | No    |
|          | 15 cm                                 | Compact black soil                                                            | Black 2.5YR to 2.5Y | Large rough sandstone nodules, gravel                                                            | No    |
| TP2      | 5 cm                                  | Organic Layer - black soil                                                    | Black 2.5YR to 2.5Y | Random inclusions - insects, vegetation                                                          | No    |
|          | 10 cm                                 | Black soil, rock (sandstone) inclusions slightly more sandy                   | Black 2.5YR to 2.5Y | Sandstone nodules                                                                                | No    |
|          | 15 cm                                 | Firmer claylike dark soil                                                     | Black 2.5YR to 2.5Y | Sandstone rock layer with larger nodules.                                                        | No    |
|          | 30 cm north half and 15 cm south side | Clay/compact dark soil                                                        | Black 2.5YR to 2.5Y | Some sandstone rock, one half of the pit was excavated past sandstone layer at 15 cm. No change. | No    |
| TP3      | 5 cm                                  | Black soil, largely vegetation and organic layer                              | Black 2.5YR to 2.5Y | Organic matter - roots etc.                                                                      | No    |
|          | 10 cm                                 | Black soil                                                                    | Black 2.5YR to 2.5Y | Some smaller rock/gravel                                                                         | No    |
|          | 15 cm                                 | Black soil (soil becoming more clay like)                                     | Black 2.5YR to 2.5Y | Sandstone rock/gravel, smaller sizes                                                             | No    |
|          | 20 cm                                 | Hard black soil                                                               | Black 2.5YR to 2.5Y | Some gravel/stone                                                                                | No    |
| TP4      | 3 cm                                  | Organic grassy top layer (not taken to 5 cm, just initial vegetation removal) | Black 2.5YR to 2.5Y | Organic matter                                                                                   | No    |
|          | 5cm                                   | Firm black soil                                                               | Black 2.5YR to 2.5Y | Vegetation roots, insects                                                                        | No    |
|          | 10cm                                  | Compact black soil                                                            | Black 2.5YR to 2.5Y | Some rocks and gravel                                                                            | No    |
|          | 15 cm                                 | Very compact black soil                                                       | Black 2.5YR to 2.5Y | Some small sandstone rocks                                                                       | No    |
| TP5      | 5 cm                                  | Organic loose top layer / black soil                                          | Black 2.5YR to 2.5Y | Roots, insects, rocks                                                                            | No    |
|          | 10 cm                                 | Black soil (5-10 cm predominantly rock)                                       | Black 2.5YR to 2.5Y | Roots, rocks and gravel                                                                          | No    |



| Test pit | Spit Depth | Soil Description                               | Munsell Chart       | Inclusions                                     | Finds |
|----------|------------|------------------------------------------------|---------------------|------------------------------------------------|-------|
| TP6      | 15 cm      | Black soil, compact/claylike (past rock layer) | Black 2.5YR to 2.5Y | Some small rocks and gravel                    | No    |
|          | 3 cm       | Organic matter, hard soil with clay content    | Black 2.5YR to 2.5Y | Organic matter, roots, lots of insect activity | No    |
|          | 5 cm       | Hard black soil                                | Black 2.5YR to 2.5Y | Very few - some sandstone, gravel              | No    |
|          | 10 cm      | Hard clay like black soil                      | Black 2.5YR to 2.5Y | Some sandstone/rock                            | No    |
| ETP1     | 2 cm       | Black soil - organic layer (top soil)          | Black 2.5YR to 2.5Y | Small amount of rock                           | No    |
|          | 10 cm      | Black soil                                     | Black 2.5YR to 2.5Y | Roots, little to no rock                       | No    |
|          | 15 cm      | Black soil, slightly firmer but still friable  | Black 2.5YR to 2.5Y | Roots                                          | No    |
| ETP2     | 2 cm       | Topsoil and vegetation layer                   | Black 2.5YR to 2.5Y | Organic material and some rock                 | No    |
|          | 10-15 cm   | Black soil                                     | Black 2.5YR to 2.5Y | Large rocks/stone/gravel                       | No    |
| ETP3     | 5 cm       | Top soil and organic layer                     | Black 2.5YR to 2.5Y | Organic matter - roots                         | No    |
|          | 10 cm      | Black soil (becoming slightly firmer)          | Black 2.5YR to 2.5Y | N/A                                            | No    |
|          | 15 cm      | Black soil                                     | Black 2.5YR to 2.5Y | Some rock and gravel (small)                   | No    |
|          | 20 cm      | Black soil                                     | Black 2.5YR to 2.5Y | Small amount of gravel                         | No    |
|          | 28 cm      | Black soil - compact and more claylike         | Black 2.5YR to 2.5Y | Small amount of gravel                         | No    |
| ETP4     | 5 cm       | Black soil                                     | Black 2.5YR to 2.5Y | Large sandstone and granite rocks              | No    |

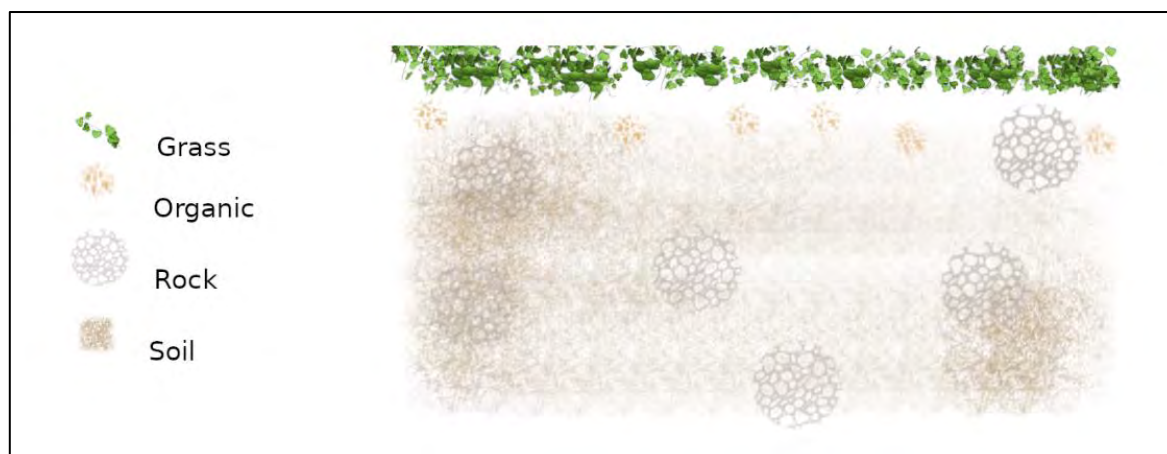


Figure 16: Typical stratigraphy of Shearwater test excavations

## 8.3 Archaeological Site

### 8.3.1 38-5-0302

The results of the test excavation did not exceed 30 cm as no cultural inclusions were located. The soil profile and rock inclusions would have made penetration of artefacts below the excavated level difficult. Additional surface material finds within the original PAD area represented subsurface material in the main excavation area. The results of the test excavation and previous assessments determined that the location has no potential for archaeological deposits. The AHIMS register will be updated.

### 8.3.2 Site Integrity

The site, as previously documented, has a number of disturbances, particularly agricultural from the 1820s onward. Geotechnical testing with 48 test pits in Stage One between 2013 and 2018 provided evidence of disturbances (Douglas Partners 2018a, p.13). The results of the test excavation have also indicated a disturbed deposit as evidenced by mixing of soils with various sized rocks throughout, the presence of bullocks as well as bioturbation. Thus, being a disturbed deposit, there is little to no likelihood of in situ deposits.

## 8.4 Machine damaged materials

The Western PAD (38-5-0302), consisted of a machine damage groove and two sandstone rocks with machine damage, which were previously identified as cultural sites by the Aboriginal Community. These objects are not sites as discussed below.

The exposed sandstone rock at Shearwater has a groove 38 cm long by 2 cm wide. As can be seen in **Figure 19** and **Figure 20**, the groove is uniform in width for the entire length and starts at approximately the same location as damage in the top right hand corner of the figure. The two sandstone pieces (**Figure 24**, **Figure 25**, **Figure 26** and **Figure 27**) were both approximately 8 cm long by 6 cm wide. It is the opinion of this report that the groove is from machine damage. The area has had geotechnical excavation in the past with 40 cm to 45 cm buckets with tiger teeth (**Figure 17**) (Douglas Partners 2018a, 9. 13).

| Product                                                                                                 | Wear Life | Penetration | Impact | Advantages                                             | Disadvantages                                            |
|---------------------------------------------------------------------------------------------------------|-----------|-------------|--------|--------------------------------------------------------|----------------------------------------------------------|
| <br>Twin Tiger Teeth | Low       | High        | High   | More penetration and longer lifespan than Single Tiger | Less leverage, requires more breakout force from machine |
| <br>Single Tiger     | Low       | High        | High   | Best penetration in frost, rock and hard conditions    | Small wear surface, shorter lifespan                     |
| <br>Rock Chisel      | High      | Medium      | Low    | Best for rock or hard ground                           | High Cost                                                |
| <br>Chisel           | Medium    | Medium      | Medium | Best all-rounder for most applications                 | May have poorer penetration in really hard ground        |

Figure 17: EIE Engineering example of bucket teeth (note single tiger tooth, second row)



On comparison with other sites in the Hunter Valley region, the groove does not show significant wear as would be expected with an Aboriginal grinding groove. Hayes et al. (2018, p. 100) discuss the inclusion of initial trace marks for grinding grooves which is the result of stone-on-stone use producing furrows. By comparison, grinding grooves in the Hunter Valley are relatively uniform with deeper distinct marks, as seen in grinding grooves located adjacent to the Hunter Expressway (**Figure 18**). Grinding grooves are typically also close to water, but the location of the North Shearwater groove is approximately 1.3 km from the Myall River. Monkey Jacket Creek is closer (approximately 700 m) to the site for water collection, whilst a non-perennial unnamed watercourse is approximately 120 m north of the site. The distance to water reduces the likelihood of grinding activity as grinding grooves are typically closer to water sources (ACT Heritage Council, 2015).

The NSW Aboriginal Sites Decision Support Tool (ASDST) notes that proximity to water and resources should be considered due to the value of a resource and the distance and time it would take to travel between sites such as the location of the groove and the Myall River (Ridges 2010). A comparative example is a registered AHIMS site approximately 10 km south west of North Shearwater near Pindimar that is located in close proximity to water. Given these details, it can be concluded that if the sandstone rock at North Shearwater had grinding activity, it would also be expected to show prominent signs of use. The considerable distance to water should also be noted. In addition, considering that the groove was not discussed in the earlier 2009 and 2010 reports and that the majority of the geotechnical testing was done after the initial reports, it is reasonable to assume that the damage to the sandstone is the result of contact with a machine.



**Figure 18: Hunter Expressway Grinding Grooves 16 May 2012**





**Figure 19: Machine damaged sandstone block in Stage One 7 December 2018**



**Figure 20: Machine damaged sandstone block rock in Stage One 7 December 2018**



**Figure 21: Machine damaged sandstone block in Stage One 7 December 2018**

Considering the other items previously located in the PAD (as listed in **Table 5** and **Figure 22**) it can be concluded that they are also the result of machine damage. The sandstone items do not have any distinguishing characteristics and, as Moore (2009, pp. 87-88) discusses, machinery can fracture stone to a similar appearance to human knapping, but the greater amount of force used produces inconsistent attributes. As can be seen in **Figure 23**, the example of machine damage in the top right resembles the items found at North Shearwater (**Figure 24**, **Figure 25**, **Figure 26** and **Figure 27**). The sandstone material is consistent with what was located in the test excavation and is not likely to be a manuport. The material can be associated with the disproved PAD.

**Table 5: Location and description of machine damaged items**

| Item                  | Features                                                                                | Easting | Northing |
|-----------------------|-----------------------------------------------------------------------------------------|---------|----------|
| Machine damage groove | Sandstone, damage from geotechnical excavation likely origin.                           | 420741  | 6389059  |
| Machine damage rocks  | Sandstone, damage from geotechnical excavation likely origin. In previous PAD location. | 420667  | 6389157  |



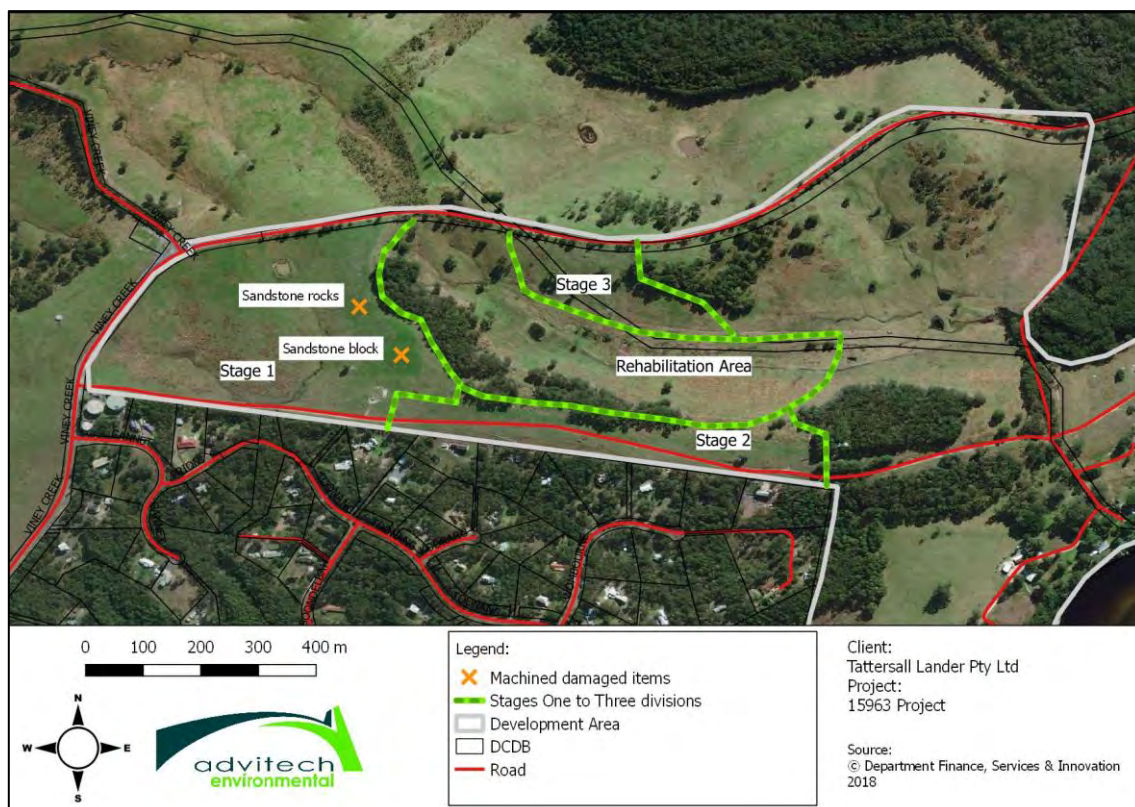


Figure 22: Machine Damage locations in Stage One

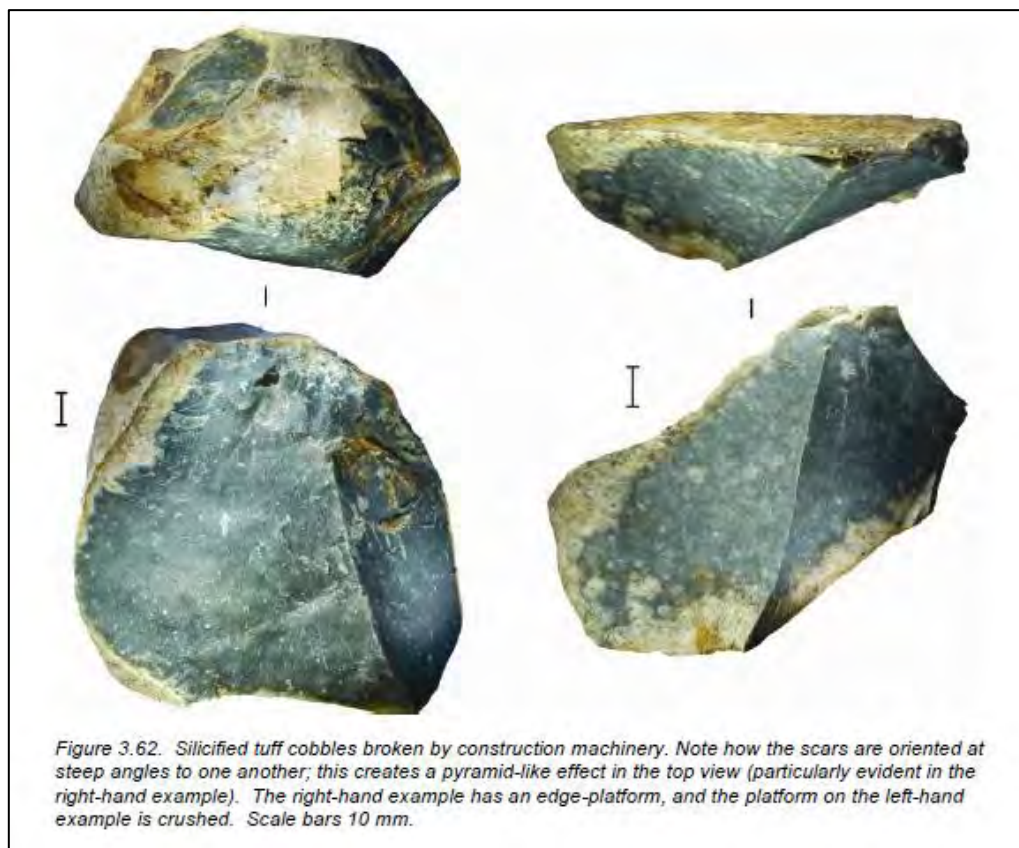


Figure 23: Moore (2009) example of machine damage





Figure 24: Machined damage sandstone 1 reduced PAD area 3 and 7 December 2018



Figure 25: Machined damage sandstone 1 Western PAD reduced area 3 and 7 December 2018





Figure 26: Machined damage sandstone 2 Western PAD reduced area 3 and 7 December 2018



Figure 27: Machined Damage Sandstone 2 Western PAD reduced area 3 and 7 December 2018

## 8.5 Spatial Patterning, Activity Types and Activity Areas

### 8.5.1 Spatial Distribution

As no sites were identified during the test excavation, spatial patterning cannot be discussed.

### 8.5.2 Chronology

As no sites were identified during the test excavation, artefact chronology cannot be discussed.

## 8.6 Interpretation

The results of the test excavation have shown no evidence of past Aboriginal Land use and this is likely due to a number of factors including:

- Distance from reliable water and subsistence resources indicates the project area was unlikely to have been utilised for camping;
- The project area may have been used for travel and/or hunting and gathering which manifest in the archaeological record as very low-density artefact scatters and/or isolated finds; and
- Past and present land uses would have displaced and/or destroyed any evidence of past Aboriginal land use.

## 8.7 Regional Context

It is noted through analysis of previous regional reports that shell is the predominant artefact type. One grinding groove is known by the Author to exist near Pindimar approximately 10 km south west of the site. As the current site does not present these features, it is suggested that this further supports the opportunistic site status of North Shearwater. The Riverside estate at Tea Gardens (ERM 2011, p. 30-32), which is between North Shearwater and Tea Gardens, had middens recorded. This represents that the area south of North Shearwater had a greater use by Aboriginal People, potentially due to better resources or less disturbance since European settlement.

## 8.8 Research Questions

1. Does the registered area meet the requirements for a Potential Archaeological Deposit?  
From the collected research and analysis, it is determined that the registered site is not a PAD and will have its site status changed to 'not a site'.
4. Are items found during previous surveys connected to the PAD?  
No. The sandstone rocks located within the PAD are natural and hold no archaeological value. The sandstone outcrop has been damaged by machinery, most likely during geotechnical testing since the original fieldwork in 2008.
5. What impact has the geological testing had on the archaeological record?  
Geological testing has clarified that Stages One to Three have a composition of clay as the core material with a mixture of silt and sand above bedrock. The description of firm to hard clay confirms a uniform soil structure across the assessment, which can be assumed to exist in the rehabilitation area as well as Stages One to Three that surround it. The number of test locations (48 in Stage One and 14 each in Stages Two and Three) adds to the level of disturbance in the North Shearwater study area (Douglas Partners 2018 a & b).

## 9. ASSESSMENT OF IMPACTS

### 9.1 Impacts

Detailed descriptions of the impacts are provided in **Section 1.5** and the results of the survey in **Section 6**. The OEH (formerly DECCW) *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (2010, p. 21) describes impacts to be rated as follows:

1. Type of harm: is either direct, indirect or none;
2. Degree of harm is defined as either total, partial or none; and
3. Consequence of harm is defined as either total loss, partial loss, or no loss of value

As shown in **Table 6**, the previously identified PADs are not sites and as such there are no impacts to the archaeological record.

**Table 6: Impact Assessment**

| Site Number                          | Type of harm | Degree of Harm | Consequence of Harm           | Site status |
|--------------------------------------|--------------|----------------|-------------------------------|-------------|
| 38-5-0302<br>(Western PAD)           | None         | None           | No loss of value - not a site | Not a site  |
| 38-5-0357<br>(machine damaged rocks) | None         | None           | No loss of value - not a site | Not a site  |
| 38-5-0356<br>(machine damage groove) | None         | None           | No loss of value - not a site | Not a site  |



## 10. MITIGATION AND MANAGEMENT STRATEGIES

Specific strategies considered below for the management of the study area relate to the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b), the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011), and the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW 2010c).

### 10.1 Conservation/protection

Conservation is the first option considered and can be suitable for all sites, including high archaeological significance and/or cultural significance. Conservation considers the care required for an indigenous site or place so to retain its significance, whilst also managing the site in a way that considers the attachment that people have.

As no sites or PADs were identified conservation/protection is not required.

### 10.2 Further investigation

If an excavation is conducted in accordance with the *Code of Practice for Archaeological Investigations in NSW* than an Aboriginal Heritage Impact Permit (AHIP) will not be required. Subsurface testing is appropriate when a PAD with sub-surface Aboriginal objects that have potential conservation value has been identified and the area cannot be avoided.

As no sites or PADs were identified in this study, no further investigation is recommended.

### 10.3 AHIP

If the project cannot avoid harm to an Aboriginal object or Place, then an AHIP is required. This can allow for an appropriate strategy to be undertaken such as salvage excavation or surface collection that must be approved by the Biodiversity Conservation Division.

As no sites or PADs were identified an AHIP is not required.



## 11. RECOMMENDATIONS

### 11.1 General

1. The individual or persons responsible for the management of onsite works will ensure that all site personnel are made aware of the statutory legislation protecting sites and places of significance. Of particular importance is the National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2010, under the National Parks and Wildlife Act 1974;
2. Should any Aboriginal objects be uncovered during works, activities should halt in that location and the Environmental Line contacted on 131 555 to report the discovery; and
3. AHIMS will be updated.

## 12. REFERENCES

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## Appendix I

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### Test Excavation Notification

30 April 2019

Office of Environment and Heritage  
PO Box 1002  
Dangar NSW 2309

**Attention:** To whom it may concern  
**Subject:** Test Excavation Notification

Dear Sir/Madam,

I am writing per the requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* to notify of an upcoming test excavation and sampling strategy

**Project Location:** The project is located north of Tea Gardens, NSW at the development site of North Shearwater. The site is at lot 1-3 DP 1154170 (map attached)

**Client:** Tattersall Lander Pty Ltd on behalf of Wolin Pty Ltd

**Archaeologist:** Jake Brown  
Advitech Environmental  
7 Riverside Drive  
Mayfield West NSW 2304  
02 4924 5400  
[jake.brown@advitech.com.au](mailto:jake.brown@advitech.com.au)

**Dates of excavation:** 27 May 2019 to 31 May 2019

**Temporary storage:** The temporary storage location will be onsite and marked with GPS. It is proposed to rebury any excavated heritage items until such time an AHIP and permanent storage can be arranged.

The test excavation is a part of an Aboriginal Cultural Heritage Assessment and being undertaken in conjunction with representatives of the local Aboriginal community.

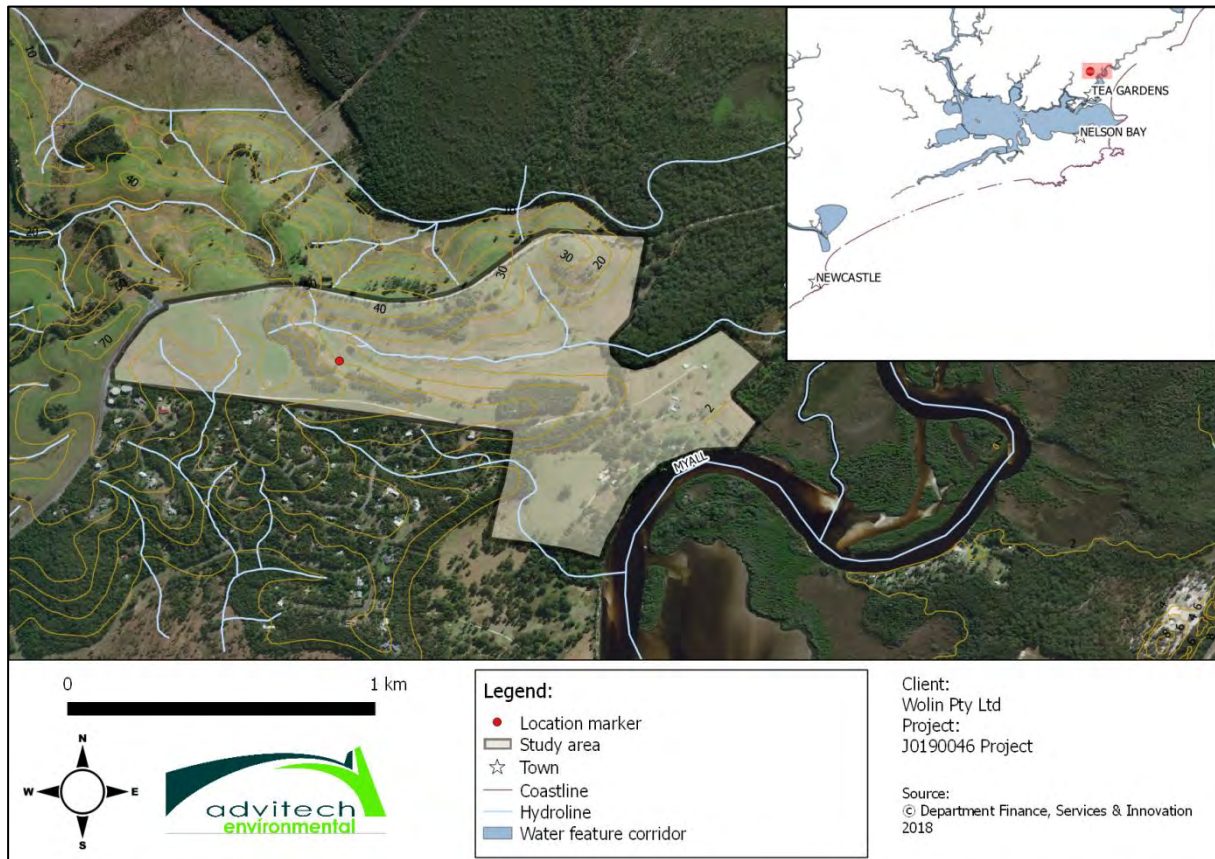
Yours faithfully,

**Jake Brown**  
Archaeologist  
Advitech Pty Limited

Job No.: J0190046  
Folder No.: F15963  
Our Ref: 15963 Letter to OEH EPRG for test excavation.docx

## Proposed Assessment

The proposed survey is to further assess the development area with the assistance of the local Aboriginal community. This survey and test excavation aims to supplement the findings of a due diligence survey in 2018 and conduct test excavation. The assessment process will consist of community participation in the field and data gathering about the potential cultural significance of the area. Previous data gathered will be used to assist in targeting specific areas of investigation.



**Figure 1: Study area location**

The proposed method of field assessment includes a limited pedestrian survey to satisfy and familiarise participants with the area. The pedestrian survey will be conducted with four people, two archaeologists from Advitech and two community members, and will focus on stages 2 and 3 of the development. Transects will be planned with a proposed spacing for each individual to cover 10m (depending on vegetation density). An environmental rehabilitation area exists between the boundary of development stages 1, 2 and 3.

The test excavation will be the predominant assessment method as three archaeological surveys and a geotechnical investigation have previously been undertaken from 2008 to 2018. The previous surveys and community consultation have recommended test surveying to determine the potential cultural heritage impact from the proposed development. A methodology was designed based on previous archaeological and geotechnical reports for the Great Lakes Council (now Mid-Coast Council) by AMBS (2010). The suggested 6 test pits in stage 1 have been adopted and modified from the AMBS (2010) excavation methodology. The proposed 6 test pits will occur along the crest and ridgeline as suggested, however will only cover 250m not 300m; this places one every 50m. The test excavation will be 1m x 1m grids. The current design of the 6 test pits will enable further investigation of the western pad (AHIMS #38-5-0302). The remaining 4 test pits may be undertaken further

evidence is required, as the community consultation with an Aboriginal representative indicated 10 test pits in Stage 1 may be needed. **Table 1** and **Figure 2** contain details of the proposed test areas and staged locations. This will be conducted as per the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* which includes:

- Test excavations must be excavated using hand tools only;
- The first excavation unit must be excavated and documented in 5cm spits at each area being (site) investigated. Based on the evidence of the first excavation unit, 10cm spits or sediment profile/stratigraphic excavation (whichever is smaller) may then be implemented;
- All material excavated from the test excavation units must be sieved using 5mm aperture wire-mesh sieve;
- Test excavation units must be excavated to at least the base of the identified Aboriginal-bearing units, and must continue to confirm the soils below are culturally sterile;
- Photographic and scale-drawn records of the stratigraphy/soil profile, features and information must be made for each single excavation point;
- Test excavation units must be backfilled as soon as possible;
- Following test excavation, an Aboriginal Site Impact Recording form must be completed and submitted to the AHIMS Registrar as soon as practicable, for each AHIMS site that has been subject to test excavation in accordance with the requirements of this Code; and
- Objects revealed during the test excavation will be reburied in a temporary storage location pending long-term management of the salvaged Aboriginal objects. The location and updated site card will be submitted to AHIMS.

The purpose of this assessment is to form part of an Aboriginal Cultural Heritage Assessment and will help to inform an Aboriginal Heritage Impact Permit.

**Table 1: Transect start and end points**

| Name | Latitude     | Longitude  |
|------|--------------|------------|
| 1    | -32.633396   | 152.154977 |
| 2    | -32.633022   | 152.154723 |
| 3    | -32.632651   | 152.154469 |
| 4    | -32.632277   | 152.154215 |
| 5    | -32.631904   | 152.153961 |
| 6    | -32.631536   | 152.153710 |
| 7    | If warranted |            |
| 8    | If warranted |            |
| 9    | If warranted |            |
| 10   | If warranted |            |



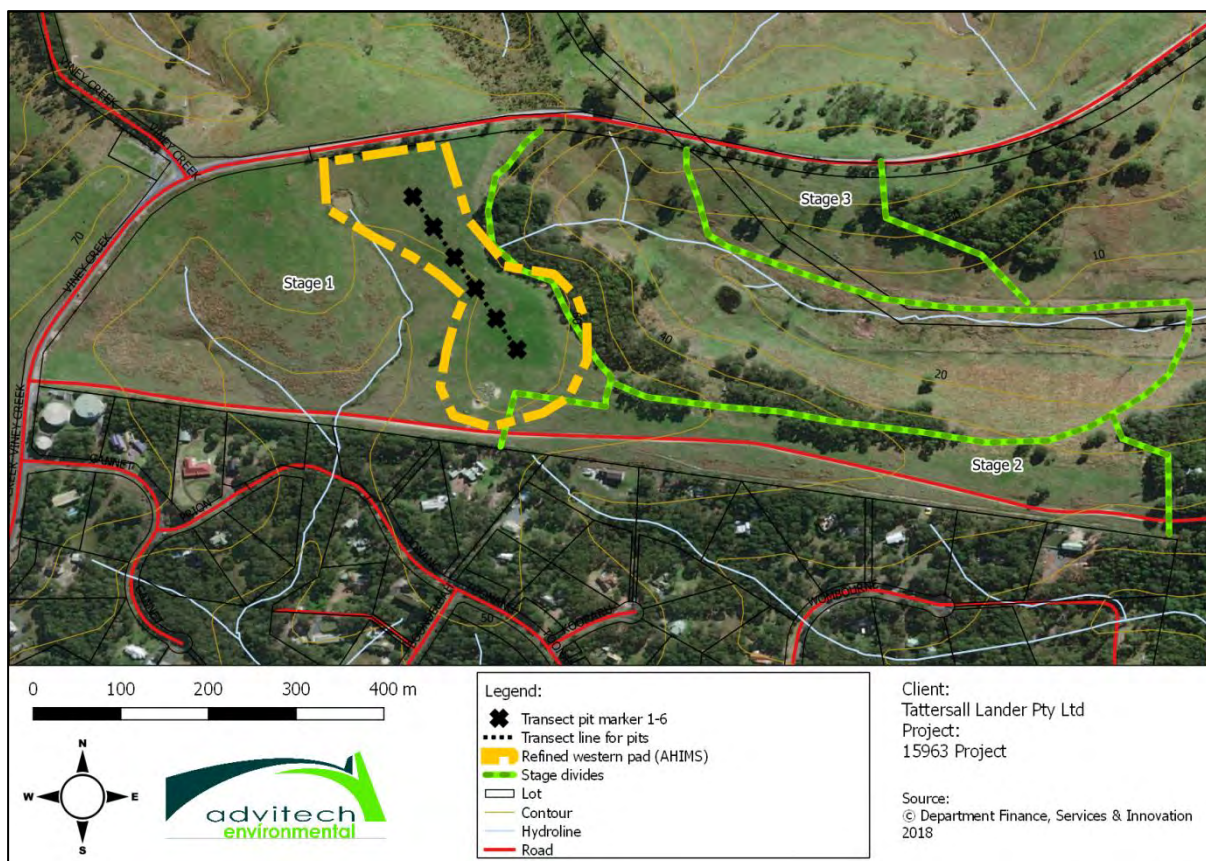


Figure 2: Transects plan map



## Appendix II

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### Test Excavation Recording Sheets

# ARCHAEOLOGICAL SPIT RECORDING FORM

PROJECT NAME:



|                        |      |                                                                                                                                                                                                     |                                                                                              |                                                                                  |
|------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| North:                 |      | Site ID: <b>NS 121</b>                                                                                                                                                                              |                                                                                              |                                                                                  |
|                        |      | Pit: <b>TP 1</b>                                                                                                                                                                                    | Date: <b>27/05/2019</b>                                                                      |                                                                                  |
| Sketch & Corner Depths |      | Spit Basic Descriptions (For detailed interpretative information see context form)                                                                                                                  |                                                                                              |                                                                                  |
| 5cm                    | 5cm  | Spit: <b>1</b>                                                                                                                                                                                      | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: <b>Black soil under the grass/vegetation layer</b>                                                                                                                                | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |      | Inclusions: <b>organic matter - roots, insects</b>                                                                                                                                                  | Excavated by:                                                                                |                                                                                  |
| 5cm                    | 5cm  | Comments:                                                                                                                                                                                           |                                                                                              |                                                                                  |
| 10cm                   | 10cm | Spit: <b>2</b>                                                                                                                                                                                      | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: <b>Black soil, slightly more compact</b>                                                                                                                                          | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |      | Inclusions: <b>Gravel/stone</b>                                                                                                                                                                     | Excavated by:                                                                                |                                                                                  |
| 10cm                   | 10cm | Comments:                                                                                                                                                                                           |                                                                                              |                                                                                  |
| 15cm                   | 15cm | Spit: <b>3</b>                                                                                                                                                                                      | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input checked="" type="checkbox"/> Firm <input checked="" type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: <b>Compact black soil</b>                                                                                                                                                         | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |      | Inclusions: <b>Large rough sandstone nodules, gravel.</b>                                                                                                                                           | Excavated by:                                                                                |                                                                                  |
| 15cm                   | 15cm | Comments: <b>Pit completed at 15cm as is below large stone layer - likely past occupation layer.</b>                                                                                                |                                                                                              |                                                                                  |
|                        |      | Spit:                                                                                                                                                                                               | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        |      | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented                       | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description:                                                                                                                                                                                   | Artefacts? <input type="checkbox"/> Yes <input type="checkbox"/> No                          |                                                                                  |
|                        |      | Inclusions:                                                                                                                                                                                         | Excavated by:                                                                                |                                                                                  |
|                        |      | Comments:                                                                                                                                                                                           |                                                                                              |                                                                                  |

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# ARCHAEOLOGICAL SPIT RECORDING FORM

PROJECT NAME:



|                        |      |                                                                                                                                                                                          |                                                                                              |                                                                                  |
|------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| North:                 |      | Site ID: NS                                                                                                                                                                              | Pit: TP 2                                                                                    | Date: 27/05/19                                                                   |
| Sketch & Corner Depths |      | Spit Basic Descriptions (For detailed interpretative information see context form)                                                                                                       |                                                                                              |                                                                                  |
| 5cm                    | 5cm  | Spit: 1                                                                                                                                                                                  | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: organic layer - black soil                                                                                                                                             |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
|                        |      | Inclusions: Random inclusions - insects, vegetation-                                                                                                                                     |                                                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
|                        |      | Comments:                                                                                                                                                                                |                                                                                              | Excavated by:                                                                    |
| 10                     | 10   | Spit: 2                                                                                                                                                                                  | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: Black soil, rock (sandstone) inclusions slightly sandier                                                                                                               |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
|                        |      | Inclusions: sand stone nodules                                                                                                                                                           |                                                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
|                        |      | Comments:                                                                                                                                                                                |                                                                                              | Excavated by:                                                                    |
| 15                     | 15   | Spit: 3                                                                                                                                                                                  | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input checked="" type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: Firmer claylike dark soil                                                                                                                                              |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
|                        |      | Inclusions: Sandstone rock larger with large nodules                                                                                                                                     |                                                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
|                        |      | Comments: nodules largely on southern side of pit                                                                                                                                        |                                                                                              | Excavated by:                                                                    |
| 30cm                   | 30cm | Spit: 4                                                                                                                                                                                  | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        |      | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input checked="" type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: clay/compact dark soil.                                                                                                                                                |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
|                        |      | Inclusions: Some sandstone rock                                                                                                                                                          |                                                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
|                        |      | Comments: Dug 1/2 pit down past sandstone layer. No change so pit was ended.                                                                                                             |                                                                                              | Excavated by:                                                                    |

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# ARCHAEOLOGICAL SPIT RECORDING FORM

PROJECT NAME:



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|------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| North:  |      | Site ID: NS                                                                                                                                                                                         |                                                                                                                                                                               |
|                                                                                          |      | Pit: TP 3                                                                                                                                                                                           | Date: 27/5/19                                                                                                                                                                 |
| Sketch & Corner Depths                                                                   |      | Spit Basic Descriptions (For detailed interpretative information see context form)                                                                                                                  |                                                                                                                                                                               |
| 5cm                                                                                      | 5cm  | Spit: 1                                                                                                                                                                                             | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                                                                                          |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                                                                                                      |
|                                                                                          |      | Soil Description: Black soil, largely vegetation/organic layer                                                                                                                                      | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                |
|                                                                                          |      | Inclusions: organic matter - roots etc.                                                                                                                                                             | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                           |
| 5cm                                                                                      | 5cm  | Comments:                                                                                                                                                                                           | Excavated by:                                                                                                                                                                 |
| 10cm                                                                                     | 10cm | Spit: 2                                                                                                                                                                                             | Excavation Method: <input type="checkbox"/> Hand <input checked="" type="checkbox"/> Machine Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                                                                                          |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input checked="" type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                                                                                                      |
|                                                                                          |      | Soil Description: Black soil                                                                                                                                                                        | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                |
|                                                                                          |      | Inclusions: Some smaller rock/gravel                                                                                                                                                                | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                           |
| 10cm                                                                                     | 10   | Comments:                                                                                                                                                                                           | Excavated by:                                                                                                                                                                 |
| 15cm                                                                                     | 15cm | Spit: 3                                                                                                                                                                                             | Excavation Method: <input type="checkbox"/> Hand <input checked="" type="checkbox"/> Machine Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                                                                                          |      | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input checked="" type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                                                                                                      |
|                                                                                          |      | Soil Description: Black soil                                                                                                                                                                        | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                |
|                                                                                          |      | Inclusions: Sandstone rock/gravel, smaller sizes                                                                                                                                                    | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                           |
| 15cm                                                                                     | 15cm | Comments: soil becoming more clay like.                                                                                                                                                             | Excavated by:                                                                                                                                                                 |
| 20cm                                                                                     | 20cm | Spit: 4                                                                                                                                                                                             | Excavation Method: <input type="checkbox"/> Hand <input checked="" type="checkbox"/> Machine Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                                                                                          |      | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input checked="" type="checkbox"/> Firm <input checked="" type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                                                                                                      |
|                                                                                          |      | Soil Description: Hard black soil                                                                                                                                                                   | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                |
|                                                                                          |      | Inclusions: some gravel/stone but less than Spit 3.                                                                                                                                                 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                           |
| 20cm                                                                                     | 20cm | Comments:                                                                                                                                                                                           | Excavated by:                                                                                                                                                                 |

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# ARCHAEOLOGICAL SPIT RECORDING FORM

PROJECT NAME:



|                        |     |                                                                                                                                                                                                     |                                                                                              |                                                                                  |
|------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| North:                 |     | Site ID: NS                                                                                                                                                                                         | Pit: TP4                                                                                     | Date: 27/5/19                                                                    |
| Sketch & Corner Depths |     | Spit Basic Descriptions (For detailed interpretative information see context form)                                                                                                                  |                                                                                              |                                                                                  |
| 3cm                    | 3cm | Spit: 1                                                                                                                                                                                             | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |     | Consistency: <input checked="" type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        |     | Soil Description: organic grassy top layer                                                                                                                                                          | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |     | Inclusions: organic matter                                                                                                                                                                          | Excavated by:                                                                                |                                                                                  |
| 2cm                    | 2cm | Comments: not taken to 5cm - just initial removal of vegetation                                                                                                                                     |                                                                                              |                                                                                  |
| Nothing of note        |     | Spit: 2                                                                                                                                                                                             | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |     | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input checked="" type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        |     | Soil Description: Firm black soil                                                                                                                                                                   | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |     | Inclusions: vegetation roots, insects                                                                                                                                                               | Excavated by:                                                                                |                                                                                  |
|                        |     | Comments:                                                                                                                                                                                           |                                                                                              |                                                                                  |
| Nothing of note        |     | Spit: 3                                                                                                                                                                                             | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |     | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input checked="" type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        |     | Soil Description: Compact black soil                                                                                                                                                                | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |     | Inclusions: Some rocks/gravel                                                                                                                                                                       | Excavated by:                                                                                |                                                                                  |
|                        |     | Comments: mostly claylike                                                                                                                                                                           |                                                                                              |                                                                                  |
| Nothing to note        |     | Spit: 4                                                                                                                                                                                             | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |     | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input checked="" type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        |     | Soil Description: very compact black soil                                                                                                                                                           | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |     | Inclusions: some small sandstone rocks                                                                                                                                                              | Excavated by:                                                                                |                                                                                  |
|                        |     | Comments: 28/5/19 finished.                                                                                                                                                                         |                                                                                              |                                                                                  |

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# ARCHAEOLOGICAL SPIT RECORDING FORM

PROJECT NAME:



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|------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| North:                 |      | Site ID: NS                                                                                                                                                                                         | Pit: TP5                                                                                     | Date: 28/8/19                                                                    |
| Sketch & Corner Depths |      | Spit Basic Descriptions (For detailed interpretative information see context form)                                                                                                                  |                                                                                              |                                                                                  |
| 5cm                    | 5cm  | Spit: 1                                                                                                                                                                                             | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: organic/loose top layer / Black soil                                                                                                                                              | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |      | Inclusions: Roots/insects/rock                                                                                                                                                                      | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                          |                                                                                  |
|                        |      | Comments: Shallow rock layer, emerging at 5cm on                                                                                                                                                    | Excavated by:                                                                                |                                                                                  |
| 10cm                   | 10cm | Spit: 2                                                                                                                                                                                             | Excavation Method: <input type="checkbox"/> Hand <input checked="" type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input checked="" type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: Black soil                                                                                                                                                                        | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |      | Inclusions: Roots, rock/gravel                                                                                                                                                                      | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                          |                                                                                  |
|                        |      | Comments: 5-10 cm is largely a rock layer                                                                                                                                                           | Excavated by:                                                                                |                                                                                  |
| 15cm                   | 15cm | Spit: 3                                                                                                                                                                                             | Excavation Method: <input type="checkbox"/> Hand <input checked="" type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input checked="" type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: Black soil, more compact/claylike                                                                                                                                                 | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |      | Inclusions: Some small rock/gravel                                                                                                                                                                  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                          |                                                                                  |
|                        |      | Comments: Past Rock layer                                                                                                                                                                           | Excavated by:                                                                                |                                                                                  |
|                        |      | Spit:                                                                                                                                                                                               | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        |      | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented                       | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description:                                                                                                                                                                                   | Artefacts? <input type="checkbox"/> Yes <input type="checkbox"/> No                          |                                                                                  |
|                        |      | Inclusions:                                                                                                                                                                                         | <input type="checkbox"/> Yes <input type="checkbox"/> No                                     |                                                                                  |
|                        |      | Comments:                                                                                                                                                                                           | Excavated by:                                                                                |                                                                                  |

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# ARCHAEOLOGICAL SPIT RECORDING FORM

PROJECT NAME:



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|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| North:                 |                                                                                                                                                                                          | Site ID: NS                                                                                  |                                                                                  |
|                        |                                                                                                                                                                                          | Pit: TP6                                                                                     | Date: 28/6/19                                                                    |
| Sketch & Corner Depths |                                                                                                                                                                                          | Spit Basic Descriptions (For detailed interpretative information see context form)           |                                                                                  |
|                        | Spit: 1                                                                                                                                                                                  | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input checked="" type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        | Soil Description: Hard soil with clay content                                                                                                                                            |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
|                        | Inclusions: <del>not</del> organic matter (roots)                                                                                                                                        |                                                                                              | Excavated by:                                                                    |
|                        | Comments: <del>are</del> Lots of insect activity                                                                                                                                         |                                                                                              |                                                                                  |
|                        | Spit: 2                                                                                                                                                                                  | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input checked="" type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        | Soil Description: Hard black soil                                                                                                                                                        |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
|                        | Inclusions: very few - some sandstone/gravel                                                                                                                                             |                                                                                              | Excavated by:                                                                    |
|                        | Comments:                                                                                                                                                                                |                                                                                              |                                                                                  |
|                        | Spit: 3                                                                                                                                                                                  | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input checked="" type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        | Soil Description: very hard clay like black soil                                                                                                                                         |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
|                        | Inclusions: Some sandstone / rock but little                                                                                                                                             |                                                                                              | Excavated by:                                                                    |
|                        | Comments:                                                                                                                                                                                |                                                                                              |                                                                                  |
|                        | Spit:                                                                                                                                                                                    | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        | Soil Description:                                                                                                                                                                        |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input type="checkbox"/> No              |
|                        | Inclusions:                                                                                                                                                                              |                                                                                              | Excavated by:                                                                    |
|                        | Comments:                                                                                                                                                                                |                                                                                              |                                                                                  |

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# ARCHAEOLOGICAL SPIT RECORDING FORM

PROJECT NAME:



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|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| North:                 |                                                                                                                                                                                          | Site ID: NS                                                                                  |                                                                                  |
|                        |                                                                                                                                                                                          | Pit: ETP 1                                                                                   | Date: 28/5/19                                                                    |
| Sketch & Corner Depths |                                                                                                                                                                                          | Spit Basic Descriptions (For detailed interpretative information see context form)           |                                                                                  |
|                        | Spit:                                                                                                                                                                                    | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        | Soil Description: Black soil - organic layer                                                                                                                                             |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
|                        | Inclusions: small amount of rock                                                                                                                                                         |                                                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
|                        | Comments: Not Sam - just top soil - 2cm approx.                                                                                                                                          |                                                                                              | Excavated by:                                                                    |
|                        | Spit: 2                                                                                                                                                                                  | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        | Soil Description: Black soil                                                                                                                                                             |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
|                        | Inclusions: roots, little to no rock.                                                                                                                                                    |                                                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
|                        | Comments: 2cm - 10cm                                                                                                                                                                     |                                                                                              | Excavated by:                                                                    |
|                        | Spit: 3                                                                                                                                                                                  | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        | Soil Description: Black soil. Slightly firmer but still friable.                                                                                                                         |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   |
|                        | Inclusions: Roots                                                                                                                                                                        |                                                                                              | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No              |
|                        | Comments: No discernable change.                                                                                                                                                         |                                                                                              | Excavated by:                                                                    |
|                        | Spit:                                                                                                                                                                                    | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        | Soil Description:                                                                                                                                                                        |                                                                                              | Artefacts? <input type="checkbox"/> Yes <input type="checkbox"/> No              |
|                        | Inclusions:                                                                                                                                                                              |                                                                                              | <input type="checkbox"/> Yes <input type="checkbox"/> No                         |
|                        | Comments:                                                                                                                                                                                |                                                                                              | Excavated by:                                                                    |

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# ARCHAEOLOGICAL SPIT RECORDING FORM

PROJECT NAME:



|                        |                                                                                                                                                                                          |                                                                                              |                                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| North:                 |                                                                                                                                                                                          | Site ID: NS                                                                                  |                                                                                  |
|                        |                                                                                                                                                                                          | Pit: ETP 2                                                                                   | Date: 28/6/19                                                                    |
| Sketch & Corner Depths |                                                                                                                                                                                          | Spit Basic Descriptions (For detailed interpretative information see context form)           |                                                                                  |
|                        | Spit: 1                                                                                                                                                                                  | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        | Soil Description: Topsoil/vegetation layer                                                                                                                                               | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        | Inclusions: organic material, some rock                                                                                                                                                  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                          |                                                                                  |
|                        | Comments: Taken to approx 2cm                                                                                                                                                            | Excavated by:                                                                                |                                                                                  |
|                        | Spit: 2                                                                                                                                                                                  | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        | Soil Description: Black soil                                                                                                                                                             | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        | Inclusions: Large Rocks/stone/gravel                                                                                                                                                     | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                          |                                                                                  |
|                        | Comments: T.P. ended here.                                                                                                                                                               | Excavated by:                                                                                |                                                                                  |
|                        | Spit:                                                                                                                                                                                    | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        | Soil Description:                                                                                                                                                                        | Artefacts? <input type="checkbox"/> Yes <input type="checkbox"/> No                          |                                                                                  |
|                        | Inclusions:                                                                                                                                                                              | <input type="checkbox"/> Yes <input type="checkbox"/> No                                     |                                                                                  |
|                        | Comments:                                                                                                                                                                                | Excavated by:                                                                                |                                                                                  |
|                        | Spit:                                                                                                                                                                                    | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        | Soil Description:                                                                                                                                                                        | Artefacts? <input type="checkbox"/> Yes <input type="checkbox"/> No                          |                                                                                  |
|                        | Inclusions:                                                                                                                                                                              | <input type="checkbox"/> Yes <input type="checkbox"/> No                                     |                                                                                  |
|                        | Comments:                                                                                                                                                                                | Excavated by:                                                                                |                                                                                  |

New page to be started every day

# ARCHAEOLOGICAL SPIT RECORDING FORM

PROJECT NAME:



|                        |      |                                                                                                                                                                                                     |                                                                                              |                                                                                  |
|------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| North:                 |      | Site ID: NS                                                                                                                                                                                         | Pit: ETP 3                                                                                   | Date: 28/5/19                                                                    |
| Sketch & Corner Depths |      | Spit Basic Descriptions (For detailed interpretative information see context form)                                                                                                                  |                                                                                              |                                                                                  |
| 5cm                    | 5cm  | Spit: 1                                                                                                                                                                                             | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| N/A                    |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: Top soil / organic layer                                                                                                                                                          | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |      | Inclusions: organic matter - <del>rock</del> roots etc.                                                                                                                                             | Excavated by:                                                                                |                                                                                  |
|                        |      | Comments:                                                                                                                                                                                           |                                                                                              |                                                                                  |
| 10cm                   | 10cm | Spit: 2                                                                                                                                                                                             | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: Black soil                                                                                                                                                                        | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |      | Inclusions: None                                                                                                                                                                                    | Excavated by:                                                                                |                                                                                  |
|                        |      | Comments: becoming slightly finer                                                                                                                                                                   |                                                                                              |                                                                                  |
| 15cm                   | 15cm | Spit: 3                                                                                                                                                                                             | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input checked="" type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: Black soil                                                                                                                                                                        | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |      | Inclusions: some rock/gravel but only small                                                                                                                                                         | Excavated by:                                                                                |                                                                                  |
|                        |      | Comments:                                                                                                                                                                                           |                                                                                              |                                                                                  |
| 20cm                   | 20cm | Spit: 4                                                                                                                                                                                             | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        |      | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input checked="" type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        |      | Soil Description: Black soil                                                                                                                                                                        | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        |      | Inclusions: none of note - small amount of gravel                                                                                                                                                   | Excavated by:                                                                                |                                                                                  |
|                        |      | Comments:                                                                                                                                                                                           |                                                                                              |                                                                                  |

New page to be started every day

# ARCHAEOLOGICAL SPIT RECORDING FORM

PROJECT NAME:



|                        |                                                                                                                                                                                          |                                                                                              |  |                                                                     |                                                                     |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------|---------------------------------------------------------------------|
| North:                 |                                                                                                                                                                                          | Site ID: NS                                                                                  |  | Date: 28/8/19                                                       |                                                                     |
|                        |                                                                                                                                                                                          | Pit: ETP 3                                                                                   |  |                                                                     |                                                                     |
| Sketch & Corner Depths |                                                                                                                                                                                          | Spit Basic Descriptions (For detailed interpretative information see context form)           |  |                                                                     |                                                                     |
|                        | Spit: 5                                                                                                                                                                                  | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine |  | Soil Sample?                                                        | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input checked="" type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |  |                                                                     |                                                                     |
|                        | Soil Description: Black soil - compact & more claylike                                                                                                                                   |                                                                                              |  | Artefacts?                                                          |                                                                     |
|                        | Inclusions: None                                                                                                                                                                         |                                                                                              |  | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |                                                                     |
|                        | Comments: pit ended here as clay layer reached                                                                                                                                           |                                                                                              |  | Excavated by:                                                       |                                                                     |
|                        | Spit:                                                                                                                                                                                    | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            |  | Soil Sample?                                                        | <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |  |                                                                     |                                                                     |
|                        | Soil Description:                                                                                                                                                                        |                                                                                              |  | Artefacts?                                                          |                                                                     |
|                        | Inclusions:                                                                                                                                                                              |                                                                                              |  | <input type="checkbox"/> Yes <input type="checkbox"/> No            |                                                                     |
|                        | Comments:                                                                                                                                                                                |                                                                                              |  | Excavated by:                                                       |                                                                     |
|                        | Spit:                                                                                                                                                                                    | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            |  | Soil Sample?                                                        | <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |  |                                                                     |                                                                     |
|                        | Soil Description:                                                                                                                                                                        |                                                                                              |  | Artefacts?                                                          |                                                                     |
|                        | Inclusions:                                                                                                                                                                              |                                                                                              |  | <input type="checkbox"/> Yes <input type="checkbox"/> No            |                                                                     |
|                        | Comments:                                                                                                                                                                                |                                                                                              |  | Excavated by:                                                       |                                                                     |
|                        | Spit:                                                                                                                                                                                    | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            |  | Soil Sample?                                                        | <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |  |                                                                     |                                                                     |
|                        | Soil Description:                                                                                                                                                                        |                                                                                              |  | Artefacts?                                                          |                                                                     |
|                        | Inclusions:                                                                                                                                                                              |                                                                                              |  | <input type="checkbox"/> Yes <input type="checkbox"/> No            |                                                                     |
|                        | Comments:                                                                                                                                                                                |                                                                                              |  | Excavated by:                                                       |                                                                     |

New page to be started every day

# ARCHAEOLOGICAL SPIT RECORDING FORM

PROJECT NAME:



|                        |                                                                                                                                                                                          |                                                                                              |                                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| North:                 |                                                                                                                                                                                          | Site ID: NS                                                                                  |                                                                                  |
|                        |                                                                                                                                                                                          | Pit: ETP 4                                                                                   | Date: 28/5/19                                                                    |
| Sketch & Corner Depths |                                                                                                                                                                                          | Spit Basic Descriptions (For detailed interpretative information see context form)           |                                                                                  |
|                        | Spit: 1                                                                                                                                                                                  | Excavation Method: <input checked="" type="checkbox"/> Hand <input type="checkbox"/> Machine | Soil Sample? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
|                        | Consistency: <input type="checkbox"/> Loose <input checked="" type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented | Context:                                                                                     |                                                                                  |
|                        | Soil Description: Black soil                                                                                                                                                             | Artefacts? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No               |                                                                                  |
|                        | Inclusions: Large sandstone & granite rocks.                                                                                                                                             | Excavated by:                                                                                |                                                                                  |
|                        | Comments: No spits - sunk to level of rock & finished                                                                                                                                    |                                                                                              |                                                                                  |
|                        | Spit:                                                                                                                                                                                    | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        | Soil Description:                                                                                                                                                                        | Artefacts? <input type="checkbox"/> Yes <input type="checkbox"/> No                          |                                                                                  |
|                        | Inclusions:                                                                                                                                                                              | Excavated by:                                                                                |                                                                                  |
|                        | Comments:                                                                                                                                                                                |                                                                                              |                                                                                  |
|                        | Spit:                                                                                                                                                                                    | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        | Soil Description:                                                                                                                                                                        | Artefacts? <input type="checkbox"/> Yes <input type="checkbox"/> No                          |                                                                                  |
|                        | Inclusions:                                                                                                                                                                              | Excavated by:                                                                                |                                                                                  |
|                        | Comments:                                                                                                                                                                                |                                                                                              |                                                                                  |
|                        | Spit:                                                                                                                                                                                    | Excavation Method: <input type="checkbox"/> Hand <input type="checkbox"/> Machine            | Soil Sample? <input type="checkbox"/> Yes <input type="checkbox"/> No            |
|                        | Consistency: <input type="checkbox"/> Loose <input type="checkbox"/> Friable <input type="checkbox"/> Firm <input type="checkbox"/> Compact <input type="checkbox"/> Cemented            | Context:                                                                                     |                                                                                  |
|                        | Soil Description:                                                                                                                                                                        | Artefacts? <input type="checkbox"/> Yes <input type="checkbox"/> No                          |                                                                                  |
|                        | Inclusions:                                                                                                                                                                              | Excavated by:                                                                                |                                                                                  |
|                        | Comments:                                                                                                                                                                                |                                                                                              |                                                                                  |

New page to be started every day





## Appendix III

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### Test Excavation Photographs

### Test Pit 1



Left to Right Spit 1 to Spit 3

### Test Pit 2



Left to Right Spit 1 to Spit 4



### Test Pit 3



Left to Right Spit 1 to Spit 4

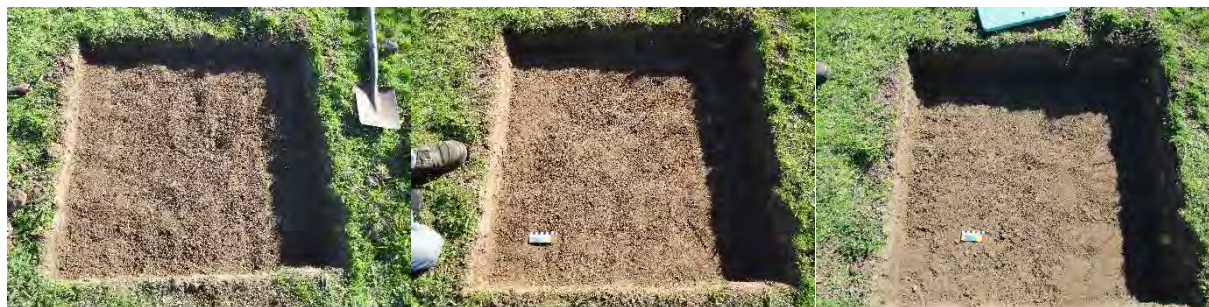
### Test Pit 4



Left to Right Spit 1 to Spit 4



### Test Pit 5



Left to Right Spit 1 to Spit 3

### Test Pit 6



Left to Right Spit 1 to Spit 3

#### Extra Test Pit 1



Left to Right Spit 1 to Spit 3

#### Extra Test Pit 2



Left to Right Spit 1 to Spit 2



### Extra Test Pit 3



Left to Right Spit 1 to Spit 4

### Extra Test Pit 4



Spit 1



## Appendix IV

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### Aboriginal Site Impact Recording Form (ASIRF)

# Aboriginal Site Impact Recording Form

AHIMS Registrar

PO Box 1967, Hurstville 2220 NSW

April 2012 OEH 2012/0558

- 1 This form must be completed following impacts to AHIMS sites that are:
  - a) a result of test excavation carried out in accordance with the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW*
  - b) authorised by an Aboriginal Heritage Impact Permit (AHIP) issued by the Office of Environment and Heritage (OEH)
  - c) undertaken for the purpose of complying with Director General's Requirements issued by the Department of Planning and Infrastructure (DP&I) for:
    - State Significant Development (SSD - Part 4),
    - State Significant Infrastructure (SSI - Part 5.1), or
    - A Major Project (Part 3A - now repealed) under the *Environmental Planning and Assessment Act 1979 (EP&A Act)*, or
  - d) authorised by a SSD/SSI/Part 3A consent/approval under the EP&A Act.
- 2 Completed forms must be submitted to the AHIMS Registrar ([www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm](http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm)).
- 3 This form is intended to complement (not replace) the AHIMS Site Recording Form. Where there is a need to provide detailed information about the nature of a site, use the AHIMS Site Recording Form.
- 4 This form does not replace the need to submit reports to OEH (as a condition of an AHIP or SSD/SSI/Part 3A consent/approval). This form must be submitted in addition to any reports.

AHIMS site ID: 38-5-0302

| Site impact authorisation (select one)                                                                                                                                                                                                               | Reference numbers, dates                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Archaeological Code (The impacts to this site were the result of test excavation carried out in accordance with the <i>Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW</i> .) | Date OEH was notified (under requirement 15c of the Code): 30/04/2019<br>OEH Regional office notified: Newcastle |
| <input type="checkbox"/> AHIP (The impacts to this site were authorised by an AHIP.)                                                                                                                                                                 | AHIP number:<br>Date issued/signed:<br>AHIMS permit ID/number:                                                   |
| <input type="checkbox"/> SSD/SSI/Part 3A application (The impacts to this site were undertaken for the purposes of complying with Director General's Requirements issued by the DP&I)                                                                | Project number:                                                                                                  |
| <input type="checkbox"/> SSD/SSI/Part 3A approved project (The impacts to this site were authorised by a consent/approval under Parts 4/5.1/3A of the EP&A Act.)                                                                                     | Date Director General's Requirements issued:<br>or<br>Date of project approval:                                  |

## Site status following impacts:

- ☒ Not a site (The investigations concluded that this is not a site.)  
☐ Valid site (The investigations confirmed that this is an Aboriginal site.)  
☐ Partially destroyed (The site was partially destroyed following authorised impacts; a portion of the site remains in situ.)  
☐ Destroyed (The site was completely destroyed following authorised impacts.)

## Geographic location

Site name: Shearwater PAD 2  
 Easting: 420500 Northing: 6389100 Coordinates must be in GDA (MGA)  
 Map sheet:  
 Zone: 56 Location method: Hand Held/Non Differential GPS

## Primary recorder

(The person responsible for the completion and submission of this form)

| Title                                                                                 | Surname                                                                | First name                        |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------|
| <input type="text" value="Mr"/>                                                       | <input type="text" value="Brown"/>                                     | <input type="text" value="Jake"/> |
| <b>Organisation:</b> <input type="text" value="Advitech"/>                            |                                                                        |                                   |
| <b>Address:</b> <input type="text" value="7 Riverside Drive Mayfield West NSW 2304"/> |                                                                        |                                   |
| <b>Phone:</b> <input type="text" value="249245400"/>                                  | <b>E-mail:</b> <input type="text" value="jake.brown@advitech.com.au"/> |                                   |
| <b>Date recorded:</b> <input type="text" value="30/05/2019"/>                         | <b>Fax:</b> <input type="text"/>                                       |                                   |

## Site information

**Open/closed site:**

### Features:

- |                          |                                      |                                     |                                         |
|--------------------------|--------------------------------------|-------------------------------------|-----------------------------------------|
| <input type="checkbox"/> | 1. Aboriginal ceremony and dreaming  | <input type="checkbox"/>            | 11. Habitation structure                |
| <input type="checkbox"/> | 2. Aboriginal resource and gathering | <input type="checkbox"/>            | 12. Hearth                              |
| <input type="checkbox"/> | 3. Art                               | <input type="checkbox"/>            | 13. Non-human bone and organic material |
| <input type="checkbox"/> | 4. Artefact                          | <input type="checkbox"/>            | 14. Ochre quarry                        |
| <input type="checkbox"/> | 5. Burial                            | <input checked="" type="checkbox"/> | 15. Potential archaeological deposit    |
| <input type="checkbox"/> | 6. Ceremonial ring                   | <input type="checkbox"/>            | 16. Stone quarry                        |
| <input type="checkbox"/> | 7. Conflict                          | <input type="checkbox"/>            | 17. Shell                               |
| <input type="checkbox"/> | 8. Earth mound                       | <input type="checkbox"/>            | 18. Stone arrangement                   |
| <input type="checkbox"/> | 9. Fish trap                         | <input type="checkbox"/>            | 19. Modified tree                       |
| <input type="checkbox"/> | 10. Grinding groove                  | <input type="checkbox"/>            | 20. Water hole                          |

## Site condition

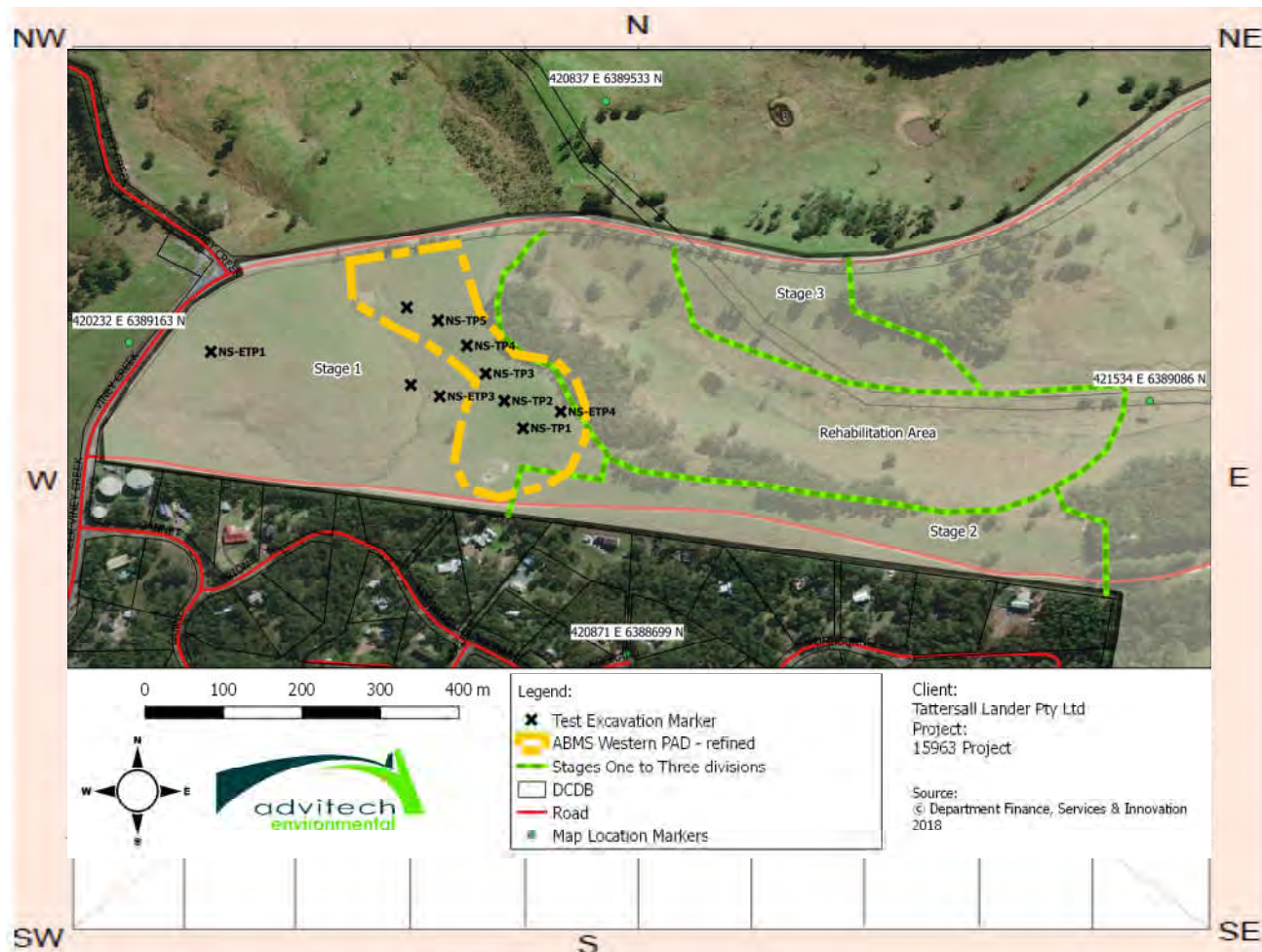
Written description of the condition of the AHIMS site (including relevant features) following the authorised impact of the site

The site has had vast agricultural disturbance from the 1820s to present. Recent disturbance includes soil testing (2013 and 2018) as part of the proposed residential development. Within the vicinity of the site are power lines, dam and rubble dump. The area currently has some surface disturbance from cattle grazing.



## Site map

Clearly demarcate the original AHIMS site boundary, show the boundaries of impacted areas and the areas where the site remains in situ. Display map coordinates.



## Methodology and results

Summary of the methodology and results of the activity or works undertaken through the authorised impacts, as relevant to the AHIMS site

Ten test excavation pits were dug. The site has had four reports written about it from 2009 to 2018 with an ACHA underway. Six of the test pits were 1m x 1m and four were 50cm x 50cm. the six larger test pits were in a rough 250m line, with the additional four smaller pits were spread out over stage one of the site. The pits were excavated until evidence of culturally sterile ground was found. Soil types were largely clay with rock layers. No cultural material was found in subsurface testing. The previous 2018 survey located two possible stone artefacts on or near the PAD. Diagnostic evidence is minimal, however community representatives were positive on cultural connection.

## Management recommendations

Summary of any management recommendations for the AHIMS site

Management recommendations include an AHIP for destruction of pad on AHIMS and potential stone artefacts relocation.

## Post-investigation significance

Discuss if the scientific/archaeological or cultural significance of the site has changed in light of the results of the investigations or works conducted at the site.

Due to minimal surface evidence and lack of subsurface evidence through geotechnical testing and archaeological survey/excavation the significance is deemed to be low. This is mainly due to heavy disturbance removing strong evidence of any Aboriginal occupation in Stage One to Stage 3 of the development.

## Additional comments

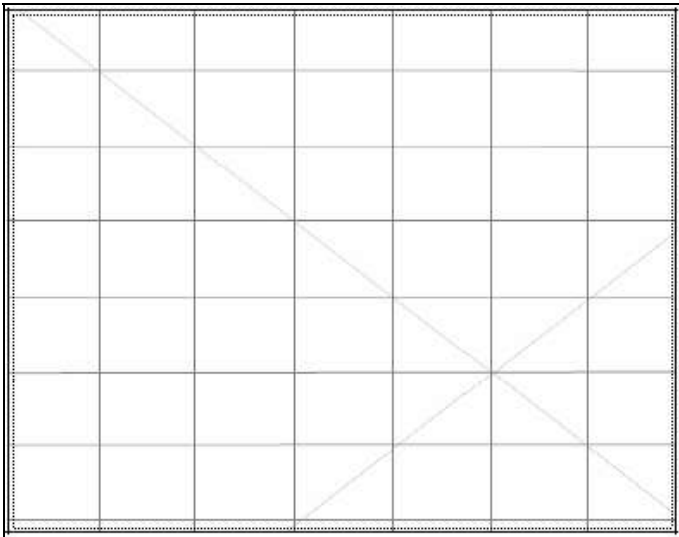
More photographs or ACHA report can be provided on request.

Site photographs

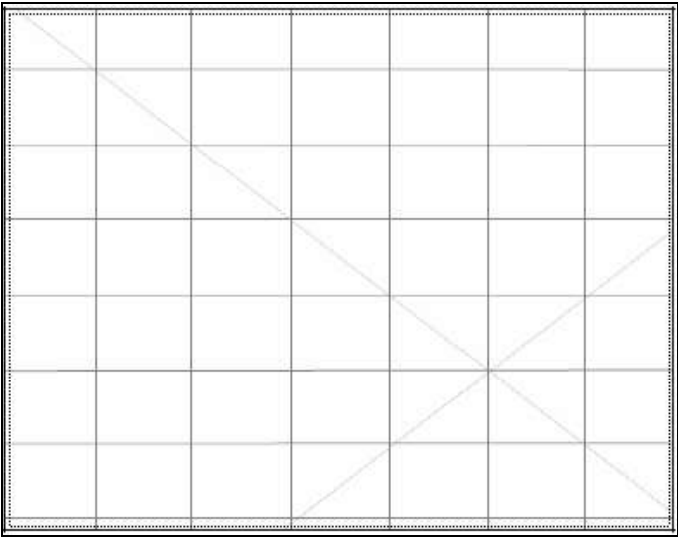
Include photographs of the authorised impacts activity, as relevant to the AHIMS site. Please keep photo size to a maximum of 200 kb.



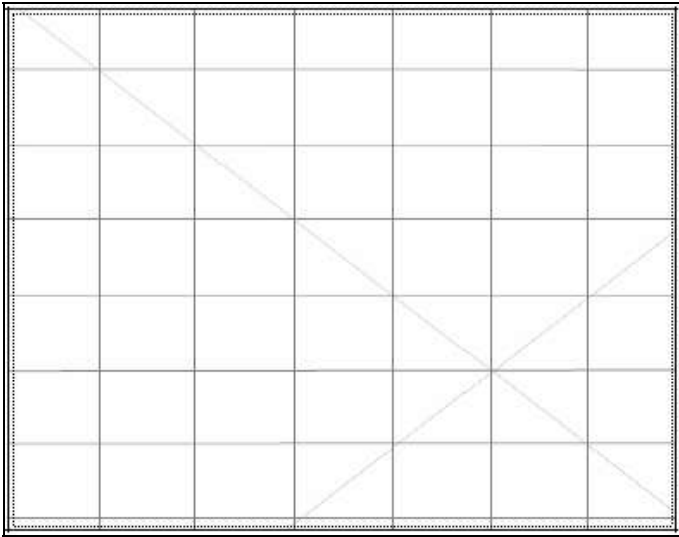
Description: Test Excavation 2



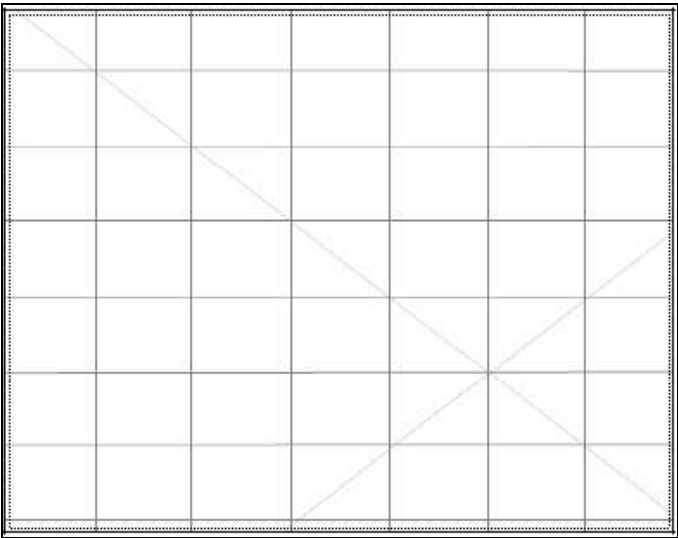
Description:



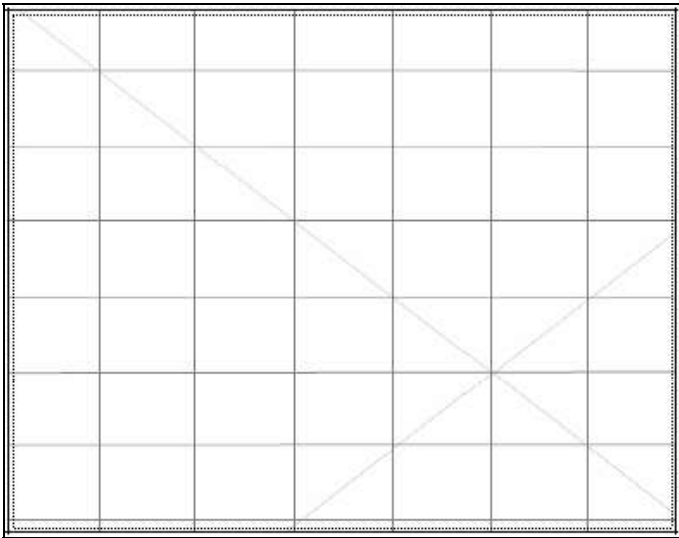
Description:



Description:



Description:



Description: