

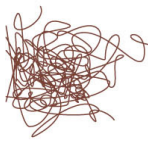


WINCHELSEA WAY REZONING PROPOSAL TERRANORA NSW

ABORIGINAL CULTURAL HERITAGE ASSESSMENT



EVERICK HERITAGE CONSULTANTS
APRIL 2016



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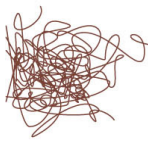
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EXECUTIVE SUMMARY

The following report details the Cultural Heritage Assessment in support of a Planning Proposal submitted to the Tweed Shire Council (TSC). The purpose of the Planning Proposal is an Application for Amendment (Planning Proposal Request) of the Tweed Shire *Local Environment Plan 2014* in Respect of Part of Lots 1 DP 595863, Lot 3 DP 819065, Lot 2 DP 819065 and Lot 1 DP 807182 at Winchelsea Way, Terranora NSW (the Project Area). The application proposes to correct a cartographic anomaly by relocating the R5/7(d). zone boundary to the south such that it generally follows the escarpment (DAC Planning Pty Ltd: 4 January 2016).

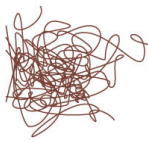
The intent of this cultural heritage assessment is to assess potential Aboriginal and non-Aboriginal (historic) heritage values associated with the Project Area, and provide recommendations on appropriate zoning considerations should Aboriginal or non-Aboriginal (historic) heritage items be identified. It also provides an assessment of potential impacts to heritage that may result from any future development of the Project Area should the rezoning proposal be approved.

Everick Heritage Consultants (the 'Consultant') was commissioned by Buttons With Bows Pty Ltd (the 'Proponent') to undertake this Cultural Heritage Assessment. The methods employed in this assessment included:

- a) a search of relevant heritage registers and regional heritage literature;
- b) review of historical aerial photographs;
- c) a review of relevant environmental data for the Project Area;
- d) a site inspection conducted with a representative of the Tweed Byron Local Aboriginal Land Council ('LALC');
- e) assessments of archaeological and cultural heritage significance and potential future impacts; and
- f) report on findings and recommended management strategies.

The methods used for this assessment are in compliance with the OEH *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (2010) and all relevant legislation as described in Section 2 of this Report. The following report complies with the accepted methodology for undertaking a Due Diligence Assessment under the *National Parks and Wildlife Act 1974* ('NPW Act').

A search was conducted on 21 January 2016 of the OEH AHIMS for land surrounding the Project Area (with a 1000 metre buffer- Service ID 208377 (Appendix B) which returned a total of 13 Aboriginal heritage sites within



the search area. Only one site was publically listed with location coordinates and is located approximately 1,500m north east of the Project Area and will not be impacted by the Project. Twelve of the listed sites are listed with information access restrictions. From working on adjacent projects, Everick understands that none of the AHIMS sites are located within on in close proximity to the Project Area.

The Project Area is within the area administered for Aboriginal cultural heritage purposes by the Tweed Byron LALC. A pedestrian survey of the Project Area for Aboriginal cultural heritage was undertaken by Ernie Williams, Sites Officer of the Tweed Byron LALC and Adrian Piper of Everick Heritage Consultants, on the 25 February 2016.

RESULTS

Aboriginal Heritage

As a result of the desktop study and field inspection with the Tweed Byron LALC Sites Officer Ernie Williams, the following conclusions were established:

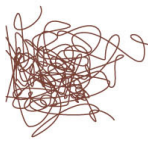
- No Indigenous cultural heritage sites or relics (Aboriginal Objects) were identified within the Project Area.
- No areas have been identified that are considered to contain potential archaeological deposits of significant Aboriginal heritage.
- All of the Project Area has been disturbed in a manner which constitutes 'disturbance' within the meaning of the Due Diligence Code and is consistent with the Due Diligence Code.

Historic Heritage

As a result of the desktop study and field inspection, two historic features were noted.

Shed

A small shed believed to be for the purpose of housing pigs in the eastern sector of Area B. We were not able to confirm with certainty the purpose of the structure. It consists of a pitched corrugated iron roof with plank cladding, timber frame and supports. The interior contains stalls with hinged doors swinging outward over metal chutes that appear to be for the purpose of cleaning the stalls. A small work area containing a sharpening mill stone on a concrete floor is at the entrance. The structure is in a derelict condition.



Milking Shed (Cow Bails)

A small cow bails containing four stalls, separator room and tank is located adjacent to a modern machinery shed and spray race. The pitched roof is of corrugated iron with timber plank cladding, timber frame and supports. The structure is in a derelict condition.

RECOMMENDATIONS ABORIGINAL HERITAGE

Having regard to the low archaeological potential of the Project Area, the following recommendations are cautionary in nature and considered sufficient for application in both planning proposal and development application stages.

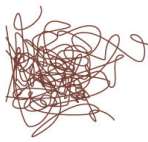
Recommendation 1: Aboriginal Objects Find Procedure

It is recommended that if it is suspected that Aboriginal material has been uncovered as a result of development activities within the Project Area:

- a) work in the surrounding area is to stop immediately;
- b) a temporary fence is to be erected around the site, with a buffer zone of at least 10 metres around the known edge of the site;
- c) an appropriately qualified archaeological consultant is to be engaged to identify the material; and
- d) if the material is found to be of Aboriginal origin, the Aboriginal community is to be consulted in a manner as outlined in the OEH guidelines: *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010).

Recommendation 2: Aboriginal Human Remains

Although it is unlikely that Human Remains will be located at any stage during earthworks within the Project Area, should this event arise it is recommended that all works must halt in the immediate area to prevent any further impacts to the remains. The site should be cordoned off and the remains themselves should be left untouched. The nearest police station (Tweed Heads), the Tweed Byron Local Aboriginal Land Council and the OEH Regional Office (Coffs Harbour) are all to be notified as soon as possible. If the remains are found to be of Aboriginal origin and the police do not wish to investigate the Site for criminal activities, the Aboriginal community and the OEH should be consulted as to how the remains should be dealt with. Work may only



resume after agreement is reached between all notified parties, provided it is in accordance with all parties' statutory obligations.

It is also recommended that in all dealings with Aboriginal Human Remains, the Proponent should use respectful language, bearing in mind that they are the remains of Aboriginal people rather than scientific specimens.

Recommendation 3: Notifying the OEH

It is recommended that if Aboriginal cultural materials are uncovered as a result of development activities within the Project Area, they are to be registered as Sites in the Aboriginal Heritage Information Management System (AHIMS) managed by the OEH. Any management outcomes for the site will be included in the information provided to the AHIMS.

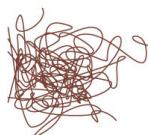
Recommendation 4: Conservation Principles

It is recommended that all effort must be taken to avoid any impacts on Aboriginal Cultural Heritage values at all stages during the development works. If impacts are unavoidable, mitigation measures should be negotiated between the Proponent, OEH and the Aboriginal community.

HISTORIC CULTURAL HERITAGE

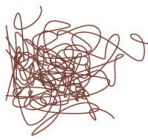
RECOMMENDATIONS: HISTORIC CULTURAL HERITAGE

Two historic features were located during the survey including two sheds associated with dairying and possibly pig production. The significance assessment in Section 10 confirmed that these features do not meet the threshold for local significance. As such, no further recommendations for historic heritage are required.

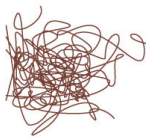


CONTENTS

EXECUTIVE SUMMARY	2
Aboriginal Heritage.....	3
Historic Heritage	3
Shed.....	3
Milking Shed (Cow Bails)	4
HISTORIC CULTURAL HERITAGE	5
RECOMMENDATIONS: HISTORIC CULTURAL HERITAGE	5
1. INTRODUCTION	10
1.1 Purpose of the Cultural Heritage Assessment	10
1.2 Proponent, Project Brief & Methodology	10
1.3 Description of Planning Proposal	11
1.4 Report Authorship.....	11
2. LEGISLATIVE AND PLANNING CONTEXT	14
2.1 The National Parks and Wildlife Act 1974 (NSW).....	14
2.2 Due Diligence Code of Practice for the Protection of Aboriginal Objects 2010.....	16
2.3 The ACHCRP (2010)	16
2.4 The Tweed Local Environment Plan 2014	17
3. LANDSCAPE CONTEXT	18
3.1 Geology and Soils	18
3.2 Vegetation.....	18
3.3 Review of Historic Imagery and Mapping	20
4. ABORIGINAL COMMUNITY CONSULTATION	23
4.1 Traditional Owner Knowledge	23
4.2 Preliminary Consultation with the Tweed Byron LALC.....	23
5. DESKTOP REVIEW: heritage register searches	23
5.1 The OEH Aboriginal Heritage Information Management System (AHIMS).....	23
5.2 Other Heritage Registers: Aboriginal & Historic Cultural Heritage	24
6. SELECTED ARCHAEOLOGICAL SYNTHESIS AND PREDICTIONS	25
6.1 Ethnohistorical Summary	25
6.2 European Settlement	26
6.3 Previous Cultural Heritage Assessments.....	26
6.4 Aboriginal Sites and Features (Range and Nature)	28
6.4.1 Isolated Artefacts	29
6.4.2 Artefact scatters / Campsites	29
7. FIELD SURVEY: ABORIGINAL CULTURAL HERITAGE	29
7.1 Survey Team.....	29

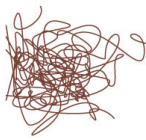


7.2	Assessment Methods	29
7.3	Constraints to Site Detection	31
7.4	Survey Coverage	31
8.	Results	36
8.1	Aboriginal Heritage	36
8.2	Historic Heritage	36
8.2.1	Shed	36
8.2.2	Milking Shed (Cow Bails)	36
9.	DUE DILIGENCE ASSESSMENT: Aboriginal cULTURAL Heritage	39
9.1	Step 1: Will the activity disturb the ground surface?	39
9.1.1	Disturbance Rankings	40
9.2	Step 2a: Search of AHIMS Database	41
9.3	Step 2b: Is the activity in an area where landscape features indicate the presence of Aboriginal cultural heritage?	42
9.4	Additional Steps Aboriginal Heritage	42
10.	IMPACT AND SIGNIFICANCE ASSESSMENT: HISTORIC HERITAGE	43
10.1	Significance Criteria and Assessment	43
10.1.1	Milking Shed and Probable Pig Shed: Significance Assessment	44
10.2	Additional Steps European Heritage	44
11.	RECOMMENDATIONS	44
11.1	ABORIGINAL CULTURAL HERITAGE	44
11.2	RECOMMENDATIONS: HISTORIC CULTURAL HERITAGE	46
12.	REFERENCES	47
	APPENDIX A: CORRESPONDANCE WITH ABORIGINAL COMMUNITY	49
	APPENDIX B: AHIMS EXTENSIVE SEARCH REPORT	50



TABLES AND FIGURES

Table 1: Summary of Environment and Ground Disturbance for Survey Unit	30
Table 2: Survey Coverage.....	32
Table 3: Project Area Disturbance Levels.....	41
Table 4: Guide to Grading Heritage Significance.....	43
Figure 1: Regional Locality.	12
Figure 2: Project Area Pan.....	13
Figure 3: Soil Landscapes of Murwillumbah Tweed Region.....	19
Figure 4: 1962 Aerial Photograph (Study Area Outline is Indicative Only).	21
Figure 5: 1970 Aerial Photograph (Study Area Outline is Indicative Only).	21
Figure 6: Existing residence and outbuildings.....	33
Figure 7: Area A - Pasture conditions. View south west..	33
Figure 8: Area B - Pasture conditions, some waterlogging in mid frame.....	34
Figure 9: Area B. Upper slopes.	34
Figure 10: Area C. View north.	35
Figure 11: Area C. Mechanically modified slope-benching and rock retaining walls. View north.	35
Figure 12: Shed believed to have been a piggery.	37
Figure 13: Shed end view.	37
Figure 14: Milking shed or 'bails'.....	38



DEFINITIONS

The following definitions apply to the terms used in this report:

Aboriginal Object means any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

Aboriginal Place means any place declared to be an Aboriginal Place (under s. 84 of the NPW Act) by the Minister administering the NPW Act, by order published in the NSW Government Gazette, because the Minister is of the opinion that the place is or was of special significance with respect to Aboriginal culture. It may or may not contain Aboriginal Objects.

ACHCRP Guidelines means the *OEH Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010)*.

AHIP means Aboriginal Heritage Impact Permit

Archaeological Code of Practice means the *OEH Code of Practice for Archaeological Conduct in New South Wales (2010)*.

Due Diligence Code means the *OEH Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (2010)*.

LALC means Local Aboriginal Land Council.

LEP means the Local Environment Plan.

NPW Act means the *National Parks and Wildlife Act 1974* (NSW).

NPW Regulations means the *National Parks and Wildlife Regulations 2009* (NSW).

OEH means the New South Wales Office of Environment and Heritage.

Project Area means the land subject to this assessment that is Part Lot 1 DP 595863, Part Lot 3 DP 819065, Part Lot 2 DP 819065 and Part Lot 1 DP 807182 at Winchelsea Way, Terranora NSW, as shown in Figure 2.

Proponent means Buttons with Bows Pty Ltd (Mr Ian Fraser 58 Fraser Drive Terranora NSW 2486) and all associated employees and contractors and subcontractors of the same.

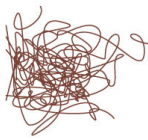
The Study Area means Lot 1 DP 595863, Lot 3 DP 819065, Part Lot 2 DP 819065 and Part Lot 1 DP 807182 at Winchelsea Way, Terranora NSW, as shown in Figure 1.

TBLALC means Tweed Byron Local Aboriginal Land Council.

The Consultant means qualified archaeological staff and/or contractors of Everick Heritage Consultants Pty Ltd.

The Project/Proposed Works means all activities associated with future residential development including all construction and landscaping within the Project Area (including activities undertaken through subsequent Development Applications).

TSC means Tweed Shire Council.



1. INTRODUCTION

1.1 Purpose of the Cultural Heritage Assessment

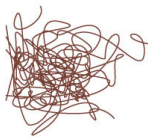
The following report details the Cultural Heritage Assessment in support of a Planning Proposal submitted to the Tweed Shire Council (TSC). The purpose of the Planning Proposal is an Application for Amendment (Planning Proposal Request) of the Tweed Shire *Local Environment Plan 2000* in Respect of Part of Lots 1 DP 595863, Lot 3 DP 819065, Lot 2 DP 819065 and Lot 1 DP 807182 at Winchelsea Way, Terranora NSW (the Project Area). The application proposes to correct a cartographic anomaly by relocating the R5/7(d) zone boundary to the south such that it generally follows the escarpment (DAC Planning Pty Ltd: 4 January 2016).

The intent of this cultural heritage assessment is to assess potential Aboriginal and non-Aboriginal (historic) heritage values associated with the Project Area, and provide recommendations on appropriate zoning considerations should Aboriginal or non-Aboriginal (historic) heritage items be identified. It also provides an assessment of potential impacts to heritage that may result from any future development of the Project Area should the rezoning proposal be approved.

1.2 Proponent, Project Brief & Methodology

Everick Heritage Consultants (the Consultant) was commissioned by Buttons with Bows Pty Ltd (the 'Proponent') to undertake a Cultural Heritage Assessment for the Project. The methods employed in this assessment included:

- a) review of historical aerial photographs;
- b) a search of relevant heritage registers and regional heritage literature;
- c) a review of relevant environmental data for the Project Area;
- d) a site inspection conducted with a representative of the Tweed Byron Local Aboriginal Land Council ('LALC');
- e) assessments of archaeological and cultural heritage significance and potential future impacts; and
- f) report on findings and recommended management strategies.



The methods used for this assessment are in compliance with the OEH *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (2010) and all relevant legislation as described in Section 2 of this Report. The following report complies with the accepted methodology for undertaking a Due Diligence Assessment under the *National Parks and Wildlife Act 1974* ('NPW Act').

1.3 Description of Planning Proposal

The purpose of the Planning Proposal is an Application for Amendment (Planning Proposal Request) of TLEP2014 in Respect of Part Lot 1 DP 595863, Part Lot 3 DP 819065, Part Lot 2 DP 819065 and Part Lot 1 DP 807182. The application proposes to correct a cartographic anomaly by relocating the R5/7(d) zone boundary to the south such that it generally follows the escarpment (DAC Planning Pty Ltd: 4 January 2016) (Figure 2).

The assessment (Sections 9 and 10) assumes that future development applications under the revised zoning plan may result in the disturbance of soils with the potential to contain Aboriginal Objects. The heritage management recommendations have been structured with this level of impact in mind.

1.4 Report Authorship

The desktop study was undertaken by Senior Archaeologists Adrian Piper, Tim Hill and qualified Archaeologist Jordan Flear. The field inspection was conducted by Senior Archaeologist Adrian Piper. This report was written by Adrian Piper and Jordan Flear. Technical review was completed by Everick Director Tim Robins. Aboriginal Community Consultation was conducted by Everick Director Tim Robins.

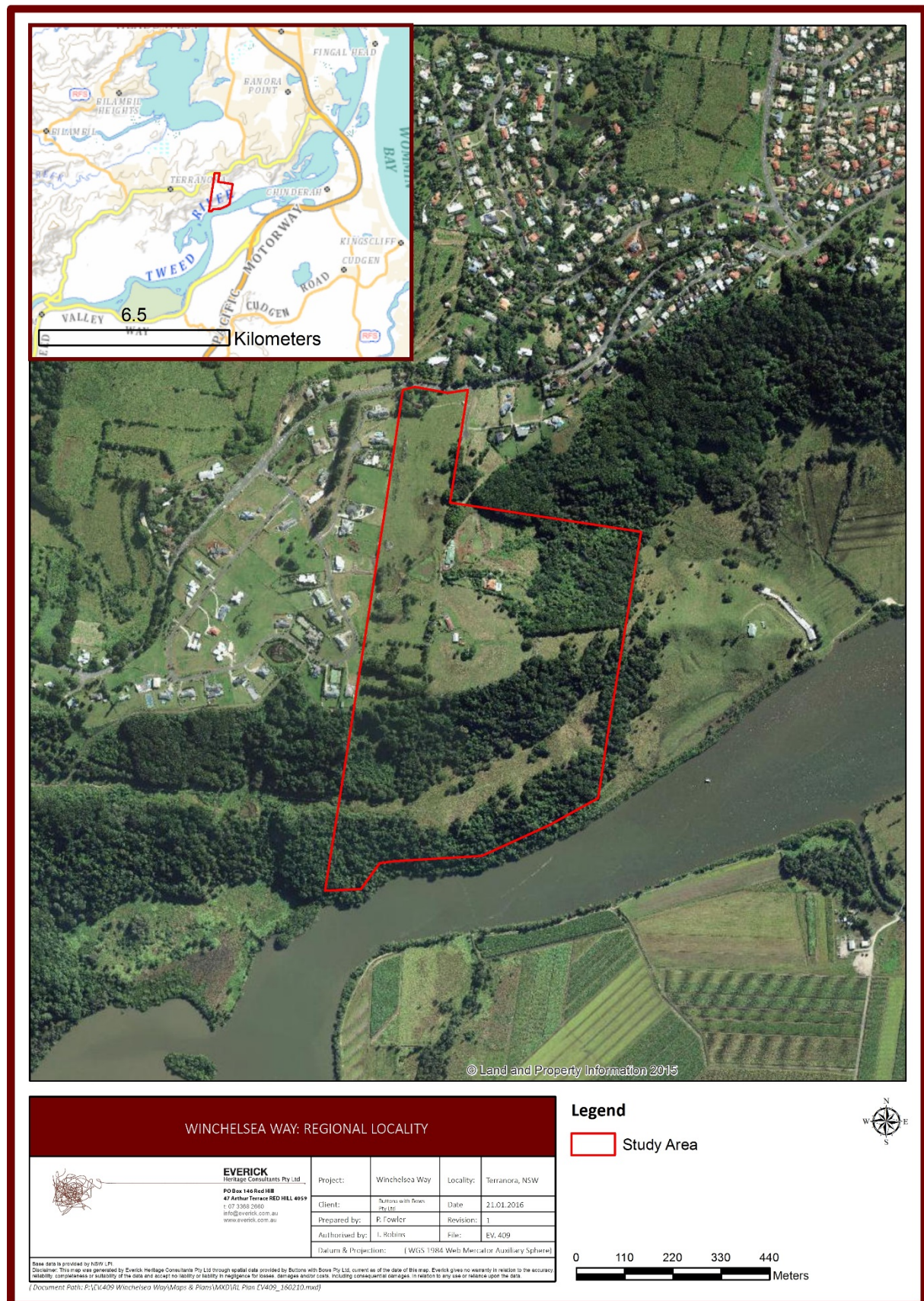
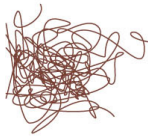


Figure 1: Regional Locality.

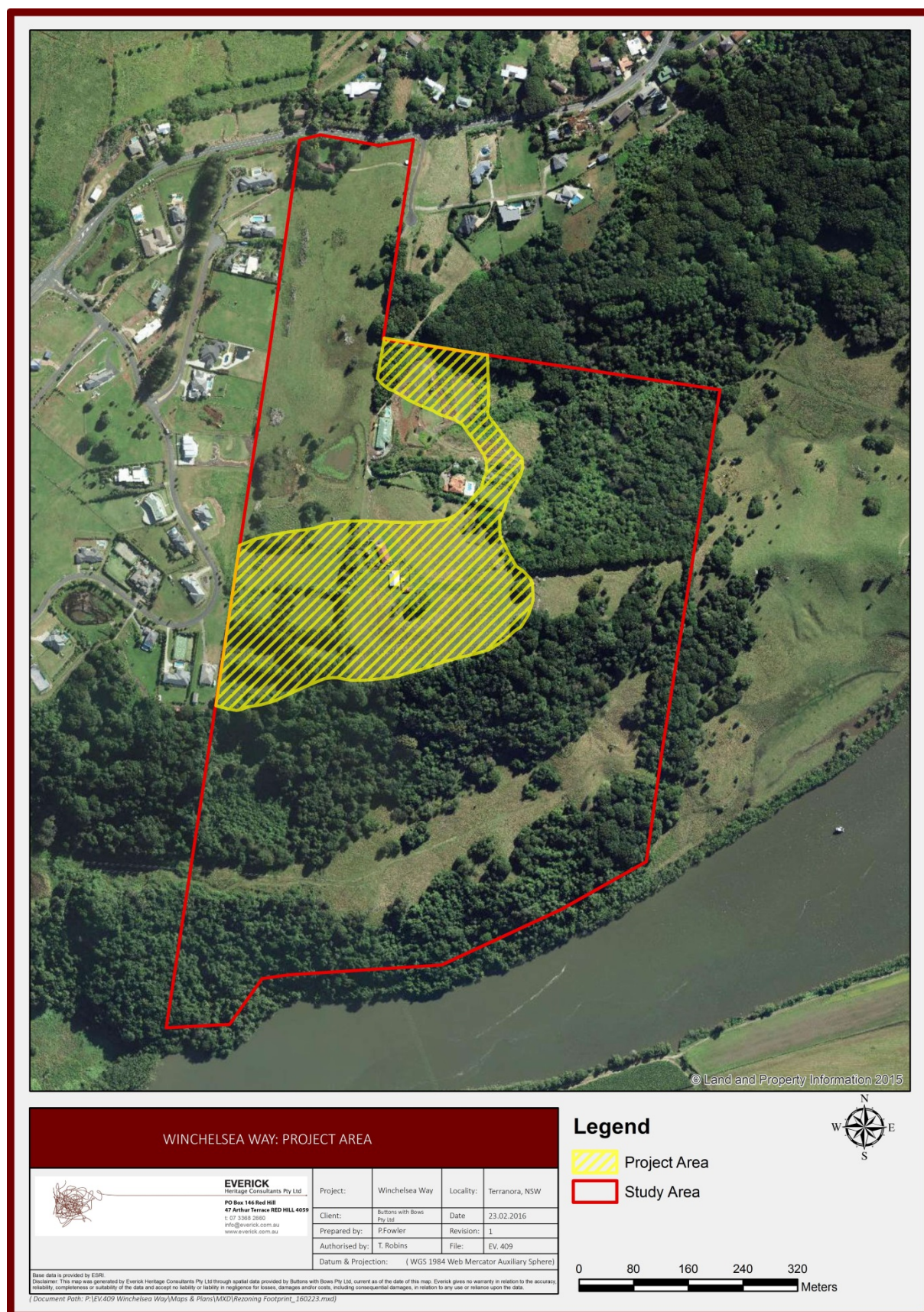
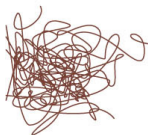
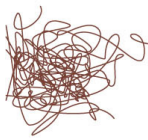


Figure 2: Project Area Pan.



2. LEGISLATIVE AND PLANNING CONTEXT

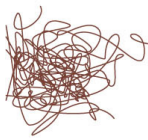
The primary State legislation concerning cultural heritage in New South Wales are the NPW Act 1974 (NSW) and the Tweed Shire Council Local Environment Plans and Development Control Plans. The Commonwealth also has a role in the protection of nationally significant cultural heritage through the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth), *The Protection of Movable Cultural Heritage Act 1986* (Cth) and the *Historic Shipwrecks Act 1976* (Cth).

For the purposes of this assessment the State and local legislation are most relevant. The consent authorities will be the Tweed Shire Council and, where a referral agency is required, the OEH. Approval from the OEH will also be required should the Project impact on identified Aboriginal Objects. The information below lists the legislative and policy framework within which this assessment is set.

2.1 The National Parks and Wildlife Act 1974 (NSW)

The *National Parks and Wildlife Act 1974* (NSW) (NPW Act) is the primary legislation concerning the identification and protection of Aboriginal cultural heritage. It provides for the management of both Aboriginal Objects and Aboriginal Places. Under the NPW Act, an Aboriginal Object is any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area, regardless of whether the evidence of habitation occurred before or after non-Aboriginal settlement of the land. This means that every Aboriginal Object, regardless of its size or seeming isolation from other Objects, is protected under the Act.

An Aboriginal Place is an area of particular significance to Aboriginal people which has been *declared* an Aboriginal Place by the Minister. The drafting of this legislation reflects the traditional focus on Objects, rather than on areas of significance such as story places and ceremonial grounds. However, a gradual shift in cultural heritage management practices is occurring towards recognising the value of identifying the significance of areas to Indigenous peoples beyond their physical attributes. With the introduction of the *National Parks and Wildlife Amendment Act 2010* (NSW) the former offence provisions under Section 86 of ‘disturbing’, ‘moving’, ‘removing’ or ‘taking possession’ of Aboriginal Objects or Places have been replaced by the new offence of ‘harming or desecrating’. The definition of ‘harm’ is ‘destroying, defacing or damaging an Object’. Importantly, in the context of the management recommendations in this assessment, harm to an Object that is ‘trivial or negligible’ will not constitute an offence.



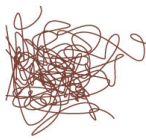
The new amendments also significantly strengthen the penalty provisions. The issue of intent to harm Aboriginal cultural heritage has been formally addressed by separating it from inadvertent harm. The penalty for individuals who inadvertently harm Aboriginal Objects has been set at up to \$55,000, while for corporations it is \$220,000. Also introduced is the concept of '*circumstances of aggravation*' which allows for harsher penalties (up to \$110,000) for individuals who inadvertently harm Aboriginal heritage in the course of undertaking a commercial activity or have a record for committing similar offences. For those who knowingly harm Aboriginal cultural heritage, the penalty will rise substantially. The maximum penalty will be set at \$275,000 or one year imprisonment for individuals, while for corporations it will rise to \$1,100,000.

Where a land user has or is likely to undertake activities that will harm Aboriginal Objects, the Director General (OEH) has a range of enforcement powers, including stop work orders, interim protection orders and remediation orders. The amended regulations also allow for a number of penalties in support of these provisions. The NPW Act also now includes a range of defense provisions for unintentionally harming Aboriginal Objects:

- a) Undertaking activities that are prescribed as 'Low Impact'.
- b) Acting in accordance with the new *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (2010).
- c) Using a consulting archaeologist who correctly applies the OEH *Code of Practice for Archaeological Conduct in New South Wales* (2010) ('Archaeological Code of Practice').
- d) Acting in accordance with an Aboriginal Heritage Impact Permit (AHIP).

The new regulations allow for a range of low impact activities to be undertaken without the need to consult the OEH or a consulting archaeologist. Generally, those who undertake activities of this nature will not be committing an offence, even if they inadvertently harm Aboriginal Objects. These activities include:

- a) Maintenance – For example on existing roads and tracks, or on existing utilities such as underground power cables and sewage lines.
- b) Farming and Land Management – for land previously disturbed by activities such as cropping, grazing, bores, fencing, erosions control etc. *
- c) Removal of dead or dying vegetation - only if there is minimal ground disturbance.
- d) Environmental rehabilitation – weed removal, bush regeneration.
- e) Development in accordance with a Development Certificate issued under the EPA Act 1979 (provided the land is previously disturbed). *



- f) Downhole logging, sampling and coring using hand held equipment.
- g) Geochemical surveying, seismic surveying, costeaning or drilling. *

* This defense is only available where the land has been disturbed by previous activity. Disturbance is defined as a clear and observable change to the land's surface, including but not limited to land disturbed by the following: soil ploughing; urban development; rural infrastructure (such as dams and fences); roads, trails and walking tracks; pipelines, transmission lines; and storm water drainage and other similar infrastructure.

2.2 Due Diligence Code of Practice for the Protection of Aboriginal Objects 2010

The Due Diligence Code has been applied in Section 9 of this assessment. It operates by posing a series of questions for land users before they commence development. These questions are based around assessing previous ground disturbance. An activity will generally be unlikely to harm Aboriginal Objects where it:

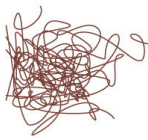
- a) will cause no additional ground disturbance; or
- b) is in a developed area; or
- c) in a significantly disturbed area.

Where these criteria are not fulfilled, further assessment for Aboriginal cultural heritage will typically be required prior to commencing the activity.

2.3 The ACHCRP (2010)

The *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010) ('ACHCRP') provide an acceptable framework for conducting Aboriginal community consultation in preparation for impacts to Aboriginal cultural heritage. Proponents are required to follow them where a Project is likely to impact on cultural heritage and where required by Council. It is recommended by the OEH that all cultural heritage assessments involve this level of consultation, although it is not strictly a requirement unless it meets the above criteria.

The ACHCRP Guidelines typically take a minimum of 90 days to complete. However, in complicated Projects this period may need to be extended by several months. The Guidelines require public notice of the assessment, preparation of a proposed methodology, undertaking site meetings and excavations where required, the



production of a draft report, which is distributed to the registered Aboriginal groups and the production of a final report.

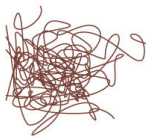
Although not strictly required, a thorough consultation process will treat the ACHCRP Guidelines as a minimum standard of community consultation. Generally, consultants must go to further effort to identify the significance of a given site to the Aboriginal community. This will likely include undertaking additional site inspections if requested by Aboriginal stakeholders, fully resourcing the community by providing copies of past archaeological and environmental assessments in the region and meeting with community members to seek their opinions of the site.

2.4 The Tweed Local Environment Plan 2014

The Tweed Shire *Local Environmental Plan* ('LEP') 2014 provides statutory protection for items already listed as being of heritage significance (Schedule 5), items that fall under the ambit of the *Heritage Act 1977* (NSW) and Aboriginal Objects under the *National Parks and Wildlife Act 1974* (NSW). It aims to ensure best practice components of the heritage decision making process are followed.

For listed heritage items, or building, work, relic or tree and heritage conservation areas, the following action can only be carried out with the consent of the Tweed Shire Council:

- a) demolishing or moving a heritage item or a building, work, relic or tree within a heritage conservation area;
- b) altering a heritage item or a building, work, relic, tree or place within a heritage conservation area, including (in the case of a building) making changes to the detail, fabric, finish or appearance of its exterior;
- c) altering a heritage item that is a building by making structural changes to its interior;
- d) disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed;
- e) disturbing or excavating a heritage conservation area that is a place of Aboriginal heritage significance;
- f) erecting a building on land on which a heritage item is located or that is within a heritage conservation area; and
- g) sub-dividing land on which a heritage item is located or that is within a heritage conservation area.



In addition, Council may not grant development consent without considering the effect the proposed development will have on the heritage significance of a heritage item or heritage conservation area concerned.

In regards to Aboriginal heritage significance (Part 5.10.8) the consent authority must, before granting consent under this clause to the carrying out of development in a place of Aboriginal heritage significance:

- a) consider the effect of the proposed development on the heritage significance of the place and any Aboriginal object known or reasonably likely to be located at the place, and
- b) notify the local Aboriginal communities (in such way as it thinks appropriate) about the application and take into consideration any response received within 28 days after the notice is sent.

3. LANDSCAPE CONTEXT

The Project Area is accessed by Winchelsea Way from Terranora Road. It is bound by residential areas to the west, steep falls to the Tweed River to the north east, east and south.

3.1 Geology and Soils

The majority of the Project Area is mapped as Carool landscape, described by Morand (1996:30) as tertiary basaltic rolling hills which overlay Burringbar and Billinudgel soil landscapes. The Carool landscape typically has smaller basalt caps, lower reliefs (50-100m) and more gentle slopes (10-15%) (Morand 1996:30). Soils within this landscape are generally deep and moderately well drained kraznozems on crests and upper slopes, which transition to chocolate soils on slopes and to imperfectly drained brown earths on footslopes and flats, which are usually overlain by rhyolitic colluvium (Morand 1996:30).

3.2 Vegetation

Prior to European settlement, the soil landscapes within the Study Area would have supported tall, closed rainforest and wet sclerophyll forests known colloquially in the region as the “Big Scrub” (Morand 1996: 30, 58). After European settlement, the “Big Scrub” was extensively cleared by the timber industry, allowing for the use of the land for sugar cane, dairying, grazing and horticulture (Morand 1996). Vegetation is currently open grasslands, with camphor laurel on former dry walling crop boundaries on the upper crest and slopes, managed lawn and exotic weed growth on steep north east slopes.

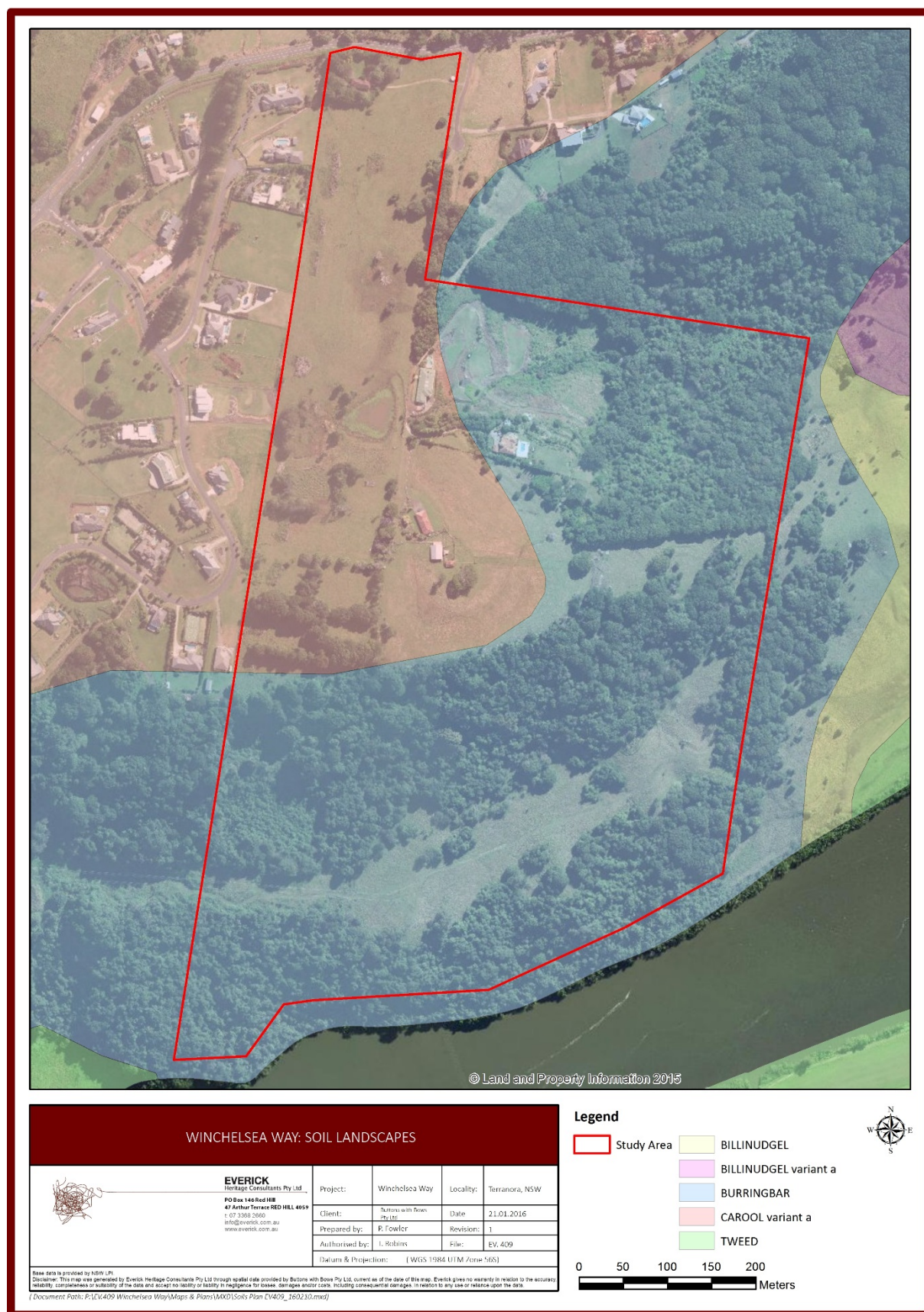
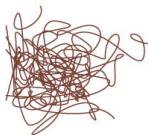
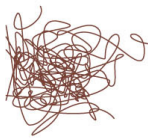


Figure 3: Soil Landscapes of Murwillumbah Tweed Region.



3.3 Review of Historic Imagery and Mapping

Historic aerial photographs from 1962, 1970, and 1996 were reviewed in order to assist in the identification of original environmental/topographic features and the degree of site disturbance post European settlement. The earliest available image from 1962 (Figure 4) is of poor quality but shows that the Project Area has been cleared of original forest vegetation. The historic aerial photographs alone cannot provide the number of clearing events, or the methods by which these events were carried out. What the aerial photographs do illustrate is that the Project Area has been subject to intensive land clearing and that vegetation regrowth has been limited. This indicates property maintenance in the Project Area, which may have resulted in further ground disturbance. The 1962 image does show that all of the cleared upper slopes around the original dwelling (Lots 1 and 3) have been both cultivated for small crops and or grazing. It is not possible to state from the imagery when cultivation ceased but grazing continues to the present.

Conclusions: All parts of the Project Area has been disturbed within the meaning of the Due Diligence Code. The Project Area has been intensively cleared of its original forest vegetation. It is unknown if vegetation was cleared in a single or multiple events, though it can be reasonably argued that some maintenance activities occurred to ensure the area remained relatively free of regrowth vegetation. The imagery does not show the intensive mechanical modification to the profiles of the north eastern slopes of subdivided Lots designated Part Lot 2 DP 819065 and Part Lot 1 DP 807182.

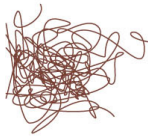


Figure 4: 1962 Aerial Photograph (Study Area Outline is Indicative Only).



Figure 5: 1970 Aerial Photograph (Study Area Outline is Indicative Only).

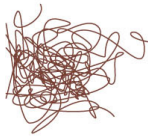
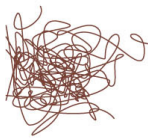


Figure 7: 1996 Aerial Photograph (Study Area Outline is Indicative Only).



4. ABORIGINAL COMMUNITY CONSULTATION

4.1 Traditional Owner Knowledge

The Aboriginal Stakeholders are the primary determinants of the significance of their cultural heritage. Members of the Aboriginal community will be consulted, and will continue to be consulted, with regard to their concerns not only about known archaeological sites in the region, but also about cultural values such as areas with historic and spiritual significance, and other values relating to flora and fauna of the area. Everick Heritage recognises that there is Traditional Owner knowledge associated with the region that may have to be treated in a confidential manner. Where there is potential for impacts upon Aboriginal heritage as a result of future development proposals, consultation under ACHCRP (2010) would apply.

4.2 Preliminary Consultation with the Tweed Byron LALC

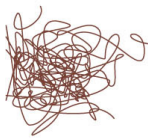
Project information, including a site plan, was presented at a meeting of the Tweed Shire Council Aboriginal Advisory Committee ('TSC AAC') on 01 April 2016. The TSC ACC is considering the proposal and will provide feedback at the next meeting. Sites Officer Ernie Williams undertook an inspection of the Study Area on February 25 with Everick Archaeologist Adrian Piper. The Sites Officer is aware of places of particular cultural significance within the locality but at this stage in the cultural heritage assessment attached no specific cultural significance to the Project Area.

A copy of this assessment has been provided to the Tweed Byron LALC for comment. All written feedback will be provided to the Proponent, Tweed Shire Council and (if required) the OEH upon receipt.

5. DESKTOP REVIEW: HERITAGE REGISTER SEARCHES

5.1 The OEH Aboriginal Heritage Information Management System (AHIMS)

Care should be taken when using the AHIMS database to reach conclusions about site prevalence or distribution. For example, a lack of sites in a given area should not be seen as evidence that the area was not occupied by Aboriginal people. It may simply be an indication that it has not been surveyed or that the survey was undertaken in areas or at times of poor ground surface visibility. Further, care needs to be taken when looking at the classification of sites. For example, the decision to classify a site an artefact scatter containing shell rather



than a midden can be a highly subjective exercise, the threshold for which may vary between archaeologists. There are also errors with the data as a result of datum discrepancies.

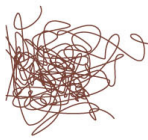
A search was conducted on 21 January 2016 of the OEH AHIMS for land surrounding the Project Area (with a 1000 metre buffer- Service ID 208377 (Appendix B) which returned a total of 13 Aboriginal heritage sites within the search area. Only one site was publically listed with location coordinates and is located approximately 1500m north east of the Project Area and will not be impacted by the Project. Twelve of the listed sites are listed with information access restrictions.

Prior to the designation of restricted access it is known to the consultant that the majority of the listed sites are middens located on the floodplain east and north east of the Terranora ridge (Piper 1976 and 1980). An artefact scatter containing shell is located in the vicinity of the old Banora Point School again well beyond one kilometre. With one exception all listed sites are located approximately one kilometre or greater from the Project Area. The exception is site #04-2-002 an isolated artefact (stone axe) reported to the consultant when working in the area in 1976. The artefact was recovered by a collector from dam spoil, within the Study Area (Lot 1/DP595863), approximately 60m south west of the Project Area at it's closest point. The location of the site was reinvestigated by Everick Heritage (2006) with the TBLALC. The Land Council recommended that earthworks to a distance of 20m from the dam be monitored by a Sites Officer. However no subdivision earthworks have taken place since 2006.

5.2 Other Heritage Registers: Aboriginal & Historic Cultural Heritage

The following heritage registers were accessed on 10 February 2016:

- **The National Heritage List (Australian Heritage Council):** Contains no Aboriginal heritage listings within or within close proximity to the Project Area.
- **Commonwealth Heritage List (Australian Heritage Council):** Contains no Aboriginal heritage listings within or within close proximity to the Project Area.
- **Register of the National Estate (Australian Heritage Council):** Contains no Aboriginal heritage listings within or within close proximity to the Project Area.
- **The State Heritage Register:**
 - Contains no Aboriginal heritage listings in Section 1 (Items listed under the NPW Act as Aboriginal Places) within or within close proximity to the Project Area;



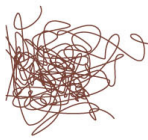
- Contains no Aboriginal heritage listings in Section 2 (Items listed under the NSW Heritage Act) within or within close proximity to the Project Area;
 - Contains no Aboriginal heritage listings in Section 3 (Items listed by Local Government and State Agencies) within or within close proximity to the Project Area.
- **Tweed LEP (2014):** Contains no Aboriginal heritage listings within or within close proximity to the Project Area.

6. SELECTED ARCHAEOLOGICAL SYNTHESIS AND PREDICTIONS

6.1 Ethnohistorical Summary

There is considerable conjecture as to the names of dialect groups, land holding clan groups and their associations to form tribes. The following is not a definitive selection of sources. The Aboriginal people of the coastal Tweed-Brunswick Rivers were part of a larger linguistic group, the Bundjalung, which spoke a range of about twenty linked dialects between the Upper Clarence extending west to Tenterfield, Warwick and Beaudesert joining the coast at about Beenleigh. The concentration of northern Bundjalung dialects, compared to the fewer dialect groups of the adjoining southern Kumbainggiri, led Crowley to suggest that the Bundjalung areas may have been colonised earlier than the Kumbainggiri, thus allowing a greater number of dialects to develop. Crowley also suggested that coastal Bundjalung dialects varied significantly from inland Bundjalung dialects (Crowley 1978). Linguistically Sharpe suggests "...a time depth for the cultural differences of less than 500 years..." (Sharpe 1985:103-104).

Dialect groups composed of interlinked clan/family groups occupied distinct areas within the wider Bunjalung association (Crowley 1978). Curr provides some evidence for this model suggesting that dialects between the Albert River and Tweed River were closely related (Curr 1887:321). Joshua Bray, a settler, postmaster and 'Protector of Aborigines' on the Tweed River, travelled from the coast to the inland Bundjalung dialect country of the Upper Richmond and found that '...The language of the Aborigines is sometimes completely different thirty miles away...' (Bray 1901:193). Tindale recognised a common dialect group extending north-south between Byron Bay and Southport and west to Murwillumbah, which he called Minjanbal (Tindale 1974:191). Bray describes a more localised terminology when referring to Coodjimburra territory as, '... the part along the coast between the Tweed and Brunswick rivers, about ten miles back from the coast....' (Bray 1901:9). The word for Brays 'tribe' is ku-ging corrupted to modern Cudgen. '...This was the place where the blacks get the red raddle or pigment to paint themselves with when going fighting or to corroboree...' (Bray 1901:10). Bray describes a 'tribe' called Moorung Moobar, '... who had all north of the Tweed to the McPhersons Range...' (Bray 1901:9). Within



these dialect associations land belonged to clan groups whose boundaries had been established in mythology (Creamer 1984).

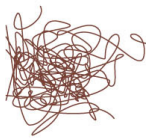
6.2 European Settlement

The history of European land uses of the Project Area is within the broader historical context of settlement of the Tweed and Brunswick Rivers. The review of historic and anecdotal accounts of European land uses in this locality suggests that the lower reaches of the Tweed River estuary were the earliest to be selectively logged for commercial and usable timbers beginning in 1844 although pine and cedar gangs from Moreton Bay had made brief ‘incursions’ as early as 1828. A cedar camp and later a settlement called Terranora developed on the south side of the Tweed River along the now Dry Dock Road. The Project Area was on the northern extremity of the vast expanse of subtropical forests known in far northern NSW as ‘the big scrub’. Commercial timbers on the estuary foreshores were cut first together with timbers suitable for construction of dwellings, boat building and other uses.

The uplands of Terranora remained untouched until the advent of sugar cane cultivation which began on a viable commercial basis with the CSR mill at Condong in 1878. The majority of leases supplying cane were on floodplain, short distances from the mill, the exception being the Robb mill on the low hills of Cudgen. In the 1880’s and 1890’s the high land at Terranora was taken up by selectors. “...This area which overlooks the river on the north side was covered in thick rainforest which the settlers set about clearing. The blocks at Terranora averaged about 40 acres and the land was fertile and elevated, minimising the likelihood of frost damaging the cane...” (Keats 1996:118-119). However growers were restricted by quotas imposed by the CSR and turned to dairying as a use for unused land and as Keats describes “...standing timber was mercilessly attacked with axe, cross cut saw and fire....as its destruction enabled the planting of grasses amenable to the dairy cow...” (Ibid: 121). Later extensive areas of Terranora were turned to small crops in fields delineated by dry stone walls. The markers of such industries are still visible within the landscape as spring board stumps, dry stone walls, planting of screens of exotic and indigenous trees and remnant buildings. These features form an important part of the historical landscape, relating to land use and labour practices.

6.3 Previous Cultural Heritage Assessments

The results of previous field assessments indicate the main concentration of recorded Aboriginal sites is in the immediate vicinity of the waterways of the Tweed River estuary including the Cobaki/Terranora Broadwaters and coastal dune fields to the north and south of the Tweed River. A far lesser concentration of recorded sites occurs



in the upland areas of the McPherson Ranges, Condong Range, North Tumbulgum, Terranora, Bilambil and Carool that form catchments adjacent to the coastal plain and the creek systems that flow from them.

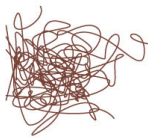
A great number of cultural heritage assessments have been conducted over similar upland landforms and soil landscapes in north eastern NSW in recent years, which have enabled site predictions to be made with greater confidence in krasnozem soil landscapes, formally carrying rainforest and or wet sclerophyll forests. The following is a summary of studies of Tweed Valley coastal uplands and the northern banks of the Tweed River closest to the Terranora hills.

A study by Piper (1994) of an earth/rock quarry site above Duroby Creek could find no evidence of Aboriginal materials. The quarry location is 1.5 km west of the Subject Lands on a ridgeline terminating at the Duroby Creek flats. An assessment (Piper 1996) over approximately 100 ha of ridge crest and slopes on red/brown krasnozem soils overlooking Cobaki Creek produced a similar result. An archaeological assessment by Piper (2004) over 12.3 ha at McAllisters Road approximately 4.5 km to the north-west of the Subject Lands found no Aboriginal archaeological evidence in an area of moderate red/brown krasnozem soil slopes. The Tweed Byron LALC had no objections to the proposed rezoning of the land to Residential (Piper 2004:27). Collins (2005) assessment over areas of the Bilambil hills also produced a nil result.

Robins and Piper (2006) investigated the majority of the current Project Area in relation to a Development Application over Lot 1 DP 595863 and Lot 3 DP 819065 Winchelsea Way, Terranora. The DEC deemed at the time that a prior inspection by TBLALC was not adequate and did not take account of a registered Aboriginal site, an isolated artefact on the property. However the subsequent heritage assessment by Everick Heritage found no further Aboriginal or historic heritage. Recommendations were made advising earthworks monitoring by a Sites Officer in the event of future subdivision works, in the near vicinity of the dam at which a stone axe had been collected prior to 1976.

An assessment conducted by Robins and Piper (2009) for the proposed Rise Development in Bilambil Heights located no Aboriginal items. The land is highly disturbed through clearing and cultivation over many years. Dry stone walling was noted to be of possible local heritage significance. 297 ha of north western slopes to the Terranora Broadwater (Altitude Development) were assessed for cultural heritage in three parcels, on former agricultural land for the most part, without locating Aboriginal nor historic cultural heritage (Everick 2009).

The total evidence of Aboriginal use/occupation of the coastal uplands of the Terranora ridges is restricted to a small number of isolated stone artefacts. The effectiveness of archaeological assessments in these uplands is invariably diminished by poor surface visibility. However the lack of archaeological evidence of Aboriginal cultural heritage in former upland rainforest localities in the Tweed Valley, is consistent with the results of

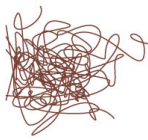


Aboriginal cultural heritage assessments from uplands of the Richmond River Valley, the Alstonville Plateau for example.

An archaeological assessment undertaken by Piper (1980) located ten shell middens on the northern bank of the Tweed River below and to the east of the Terranora and Banora Point districts. These ranged from low-density shell scatters to large raised mounds of shell and artefactual materials. One site (Terranora 19) known to contain skeletal material, was the subject of a salvage excavation by Barz (1980). The study also recorded four open sites containing stone artefactual material and six isolated instances of edge ground axes. Nine bungwahl cleavers, used in the preparation of fern rhizome, were among the recorded sites. The shell content of each midden site were estuarine species, particularly oyster, cockle and whelk. All of the sites were located in a 3 km strip on the northern banks of the Tweed River extending above Barneys Point Bridge. The condition and content of these sites was further reviewed by Piper (1994) as part of an archaeological assessment of the upper Tweed River.

6.4 Aboriginal Sites and Features (Range and Nature)

It is probable that the Project Area was part of a vast expanse of catchment area for food and resources to the occupants of nearby campsites closer to the Tweed River and floodplain back swamps. Referring to the selection of campsites in the region Sullivan (1982) found that the essential determinant was the availability of fresh water. This study identified that in the coastal area 77% of shell middens were found within 100 metres of a fresh water source. Sources of fresh water abound throughout the Terranora ridges. Virtually all data in relation to the distribution and types of Aboriginal archaeological sites is applicable to the coastal plains and estuaries. There is very little or no research that would be useful in predicting site locations within open contexts of the former subtropical rainforests and associated forest types of the former 'big scrub' or its most northern extremities in the Tweed Valley. This is largely because Aboriginal archaeological materials in this context are restricted to rare scarred trees, a small number of stone flakes, flaked pieces and isolated artefacts, therefore there is little comparative data. Given the known historic disturbance history of the Terranora district and the paucity of Aboriginal heritage identified through many assessments and sub surface investigations in this type of soil landscape and open terrain, the following site types are considered to have a potential to exist within the Project Area: artefact scatters possibly associated with shell and isolated artefacts. The following site types can reasonably be excluded as unlikely: middens, scarred trees, stone quarries unless sources of cryptocrystalline rock occurs, ceremonial grounds containing raised earth or stone structures, mythological sites and burials.



6.4.1 *Isolated Artefacts*

These consist of single stone artefacts, which may have been randomly discarded or lost. They may occur in almost any environmental context exploited by Aboriginal people. They are commonly stone axes, single cores, hammer stones, bevelled pounders, pebbles and flakes. Their presence may indicate that more extensive scatters of stone artefacts exist or existed nearby, perhaps obscured by vegetation or dispersed by mechanical means. There is a potential for Isolated Artefacts to occur in the Project Area.

6.4.2 *Artefact scatters / Campsites*

Artefact scatters may be found in almost any elevated position adjacent to wetlands or creeks. They will also be found on low grades or the level sections of ridge crests and spur lines, particularly where higher ground tapers toward the coastal plain. Material found at these sites is generally stone artefactual material only. A recorded site may consist of as little as two artefacts within 50 metres of each other or heavy concentrations of stone artefactual materials and other materials such as ochre, bone and cooking hearths. Low-density scatters of midden shell may also be present. There is a low to moderate potential for Artefact Scatters to occur in the Project Area.

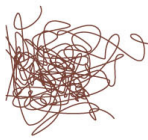
7. FIELD SURVEY: ABORIGINAL CULTURAL HERITAGE

7.1 Survey Team

The Project Area is within the area administered for Aboriginal cultural heritage purposes by the Tweed Byron LALC. A pedestrian survey of the Project Area for Aboriginal cultural heritage was undertaken by Ernie Williams, Sites Officer of the Tweed Byron LALC and Adrian Piper of Everick Heritage Consultants, on the 25 February 2016.

7.2 Assessment Methods

The field assessment methods aimed to inspect exposed ground surfaces as conditions would allow; to record any archaeological material found and assess its significance; and assess the potential for concealed Aboriginal archaeological sites. The assessment also aims to establish if there are sites or areas of a non-archaeological nature significant to the Aboriginal community. At this stage of the assessment this is through consultation with TBLALC.



Archaeological features may include evidence of stone artefact scatters or individual artefacts, traces of bone (human and animal), shell deposits, scarred trees and ash-stained earth that might represent fireplaces. When artefacts are found their location was recorded with a GPS (using WSG84 datum), photographed and generally described. A note is made of artefact types and their numbers. General characteristics of the artefacts are noted including raw material type and condition including the degree of weathering and heat cracking. The length, width and thickness of a number of artefacts are recorded. Woodland areas with 'old growth' trees would be inspected for evidence of Aboriginal scarring due to bark removal or holes/notches cut into bark and tap wood. The details would be logged on standard OEH Site Recording Forms for registration with the OEH AHIMS.

Photographs were taken as a record of general features and conditions and to document the degree of surface visibility. Notes were made of the degree of surface visibility, the area of visibility, ground cover, land uses and any other relevant features. In addition to assessing the cultural heritage potential of the Project Area, the survey aimed to confirm the interpretation of the nature and degree of ground disturbance observed in historical aerial photographs and satellite imagery.

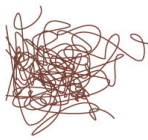
For ease of ground coverage and for purposes of description the Project Area is treated as three broad survey units based on the landforms identified within the Project Area. These correspond with Lots as follows:

- Area A. Part Lot 1 DP 595863
- Area B. Part Lot 3 DP 819065
- Area C. Part Lot 2 DP 819065 and Part Lot 1 DP 807182.

A summary of the landscape features and broad disturbance types within the survey unit are listed in Table 1.

Table 1: Summary of Environment and Ground Disturbance for Survey Unit.

<i>Survey Unit</i>	<i>Environmental Description</i>	<i>Ground Disturbance Summary</i>
Area A Crest and upper slope	Gentle/moderate slopes. Closed grass and rock covers. Kraznozom soils. Former closed wet sclerophyll or rainforest forest. Currently cleared of camphor in part for cattle pasture.	Land clearing, cultivation for small crops, rock removal. Highly disturbed
Area B: Spur crest	Gentle slope. Sod grassland. Closed ground covers. Kraznozom soils. Former closed wet sclerophyll or rainforest forest. Currently cleared for cattle pasture.	Land clearing, cattle disturbance, waterlogging in parts. Disturbed



Area C: Upper mid and side slopes	Steep slopes, extensive proportion mechanically modified by pads, rock retaining walls and connecting vehicle benches. Deep scouring in places. Closed Regrowth vegetation – camphor laurel and other exotic species.	Extensive mechanical disturbance. Highly disturbed.
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7.3 Constraints to Site Detection

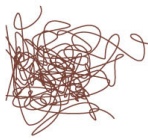
An assessment of the constraints to site detection is made to assist in formulating a view as to the effectiveness of the field inspection to find Aboriginal sites and cultural heritage materials. It also assists in the forming of a view of the likelihood of concealed sites, keeping in mind a site specific knowledge of the disturbance impacts that European land uses and natural processes may have had on the ‘survivability’ of Aboriginal sites in a Project Area.

The constraints to site detection are almost always most influenced by post European settlement land uses and seldom by natural erosion processes. The area of surface exposure and the degree of surface visibility within exposed surfaces are usually the product of ‘recent’ land uses e.g. land clearing, ploughing, road construction, natural erosion and accelerated (manmade) erosion (McDonald et .al. 1990:92).

In this case the major ‘manmade’ constraints to Aboriginal site survivability and detection are due to the clearing of original rainforest and the subsequent impacts of cultivation and grazing which through, what is called taphonomic processes can have the effect of accelerating artefacts such as stone downward through soft soils. Detection of Aboriginal archaeological sites in the Project Area is severely limited by closed ground cover and dense regrowth vegetation and in parts steep terrain. The Project Area has undergone extensive ground disturbance in terms of the Due Diligence Code.

7.4 Survey Coverage

To achieve as thorough and effective an archaeological assessment as possible a systematic ground survey of all surfaces is the best method to achieve effective coverage. However in the Project Area the poor visibility conditions due to closed ground covers of either rock or grass prevented a systematic search across all sections of the Project Area. Therefore an opportunistic search of each survey unit was conducted with a particular focus on any exposed ground surfaces as the only means practically possible. As the search area is relatively open all trees potentially of sufficient age to carry Aboriginal cultural scarring could easily be identified. The following summarises the broad conditions for the survey of each unit within the Project Area:



Area A: Approximately 3.2ha. Gentle/moderate slopes. Closed ground covers, limited areas of surface exposure. Approximately 90% of the area was inspected on foot. **Surface area possible to inspect:** c.a. 5%. **Surface visibility:** c.a. 60%. Type of exposure: Shade lines and cattle pads.

Area B: Approximately 3.4ha. Gentle – slope. Closed ground covers with occasional surface exposures. Waterlogged in parts. Approximately 20% of the area was inspected on Foot. **Surface area possible to inspect:** c.a. 5%. **Surface visibility:** c.a. 20%. Type of exposure: Cattle pads.

Area C: Approximately 2.46ha Steep Slopes. Exposed basalt stone and boulders slopes with occasional deep scours. Closed regrowth vegetation ground covers with occasional surface exposures. Highly mechanically modified. Approximately 60% of the area was inspected on foot. **Surface area possible to inspect:** c.a. 10%. **Surface visibility:** c.a. 80%. Type of exposure: Erosion associated with watercourses, tracks and batters.

Table 2 presents information on the extent to which survey data provides sufficient evidence for an evaluation of the distribution of archaeological materials across the Project Area. The evaluation of survey coverage provides a measure of the potential for the survey unit to reveal archaeological evidence. The calculations in Table 2 do not provide an exact percentages, but reasonable estimates.

Table 2: Survey Coverage.

Unit	Area (ha)	Exposure %	Area of Exposure (ha)	Visibility %	Area for Site Detection (ha)	% of Lf for Site Detection	Sites Found
Area A	30200	5	1510	60	906	3	0
Area B	30430	5	1521	20	304	1	0
Area C	20460	10	2046	80	1636	8	0

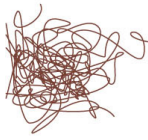


Figure 6: Existing residence and outbuildings.



Figure 7: Area A - Pasture conditions. View south west..

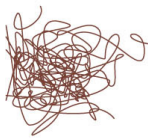


Figure 8: Area B - Pasture conditions, some waterlogging in mid frame.



Figure 9: Area B. Upper slopes.

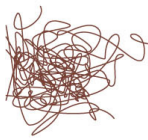
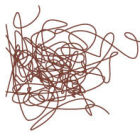


Figure 10: Area C. View north.



Figure 11: Area C. Mechanically modified slope-benching and rock retaining walls. View north.



8. RESULTS

8.1 Aboriginal Heritage

As a result of the desktop study and field inspection with the Tweed Byron LALC Sites Officer Ernie Williams, the following conclusions were established:

- No Indigenous cultural heritage sites or relics (Aboriginal Objects) were identified within the Project Area.
- No areas have been identified that are considered to contain potential archaeological deposits of significant Aboriginal heritage.
- All of the Project Area has been disturbed in a manner which constitutes 'disturbance' within the meaning of the Due Diligence Code and is consistent with the Due Diligence Code.

8.2 Historic Heritage

As a result of the desktop study and field inspection, two historic features were noted.

8.2.1 *Shed*

A small shed believed to be for the purpose of housing pigs in the eastern sector of Area B. We were not able to confirm with certainty the purpose of the structure. It consists of a pitched corrugated iron roof with plank cladding, timber frame and supports. The interior contains stalls with hinged doors swinging outward over metal chutes that appear to be for the purpose of cleaning the stalls. A small work area containing a sharpening mill stone on a concrete floor is at the entrance. The structure is in a derelict condition.

8.2.2 *Milking Shed (Cow Bails)*

A small cow bails containing four stalls, separator room and tank is located adjacent to a modern machinery shed and spray race. The pitched roof is of corrugated iron with timber plank cladding, timber frame and supports. The structure is in a derelict condition.

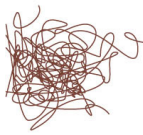


Figure 12: Shed believed to have been a piggery.



Figure 13: Shed end view.

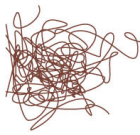
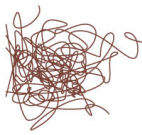


Figure 14: Milking shed or 'bails'.



9. DUE DILIGENCE ASSESSMENT: ABORIGINAL CULTURAL HERITAGE

The purpose of the Due Diligence Assessment is to determine if there are areas that have a particular potential to contain Aboriginal cultural heritage and to assess whether any subsequent Development Applications resulting from approval of the planning proposal will destructively impact upon known and or concealed Aboriginal heritage sites. For the purposes of this analysis, it has been assumed that subsequent Development Applications may result in partial or complete removal of the topsoil (cultural horizon) within the Project Area as a result of bulk earthworks.

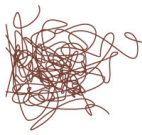
As discussed in Section 2, the Due Diligence Code recommends a staged analysis of cultural and archaeological factors. The information below documents the analysis of the Project Area when compared against these guidelines.

9.1 Step 1: Will the activity disturb the ground surface?

Yes. The current planning proposal will allow for future rural residential development within the Project Area. It is assumed that future development will disturb the ground surface to at least a minor-moderate degree, and possibly result in the removal of the cultural horizon. Development works may include construction of roads, drains, essential infrastructure (plumbing and electricity) and in-ground swimming pools. Impacts are unlikely to be additional to prior historic disturbances.

The field inspection found that areas of bare or partial earth exposure and the subsequent proportion of the survey unit where site detection is possible are low, but common for archaeological assessments in this locality, where exposure percentages of less than 10% are the norm. The ground exposure percentage is low, however the land use history precludes Aboriginal sites with the possible exception of isolated artefacts and disturbed artefact scatters representative of broad scale background scatter of which there is no method of predicting.

The evidence of initial past ground disturbance can be reasonably implied from historical sources without their specifically referring to the Assessment Areas. The Project Area is at the northern extent of the vast expanse of subtropical forests known in far northern NSW as 'the big scrub'. The fact that this forest is now replaced by pasture grasses where once there were trees of great size and usually a ground cover of stones and boulders is evidence enough that ground disturbance must have been total in lateral terms and to varying depths.



Prior to the 'Settler Period' of 1861 these forests were logged principally for red cedar. Unless the selected tree was on a creek bank it required a clearing (possibly a camp) at the tree site, clearing by hand of any smaller growth that could obstruct the fall and the cutting of tracks in and out for bullock teams to extract the logs. While the actual cutting down of a tree above its buttress roots need not cause ground disturbance other than where it falls, getting in and out by an unwieldy bullock team did. Hoff (2010) referring to early logging practices.

"Although the early timber cutters sought cedar exclusively, even the most skilled axeman and bullock drivers soon caused massive damage to the surrounding forest. Wherever they worked ...gave way to broad expanses of wheel ruts and mud as unwieldy jinkers and bullock teams manoeuvred the great log out of the undergrowth: ...the snagging practice in the scrub gouged out the loose surface soil and, aided by the rains, the bush tracks developed into winding ruts lined with the broken ends of tree roots (Dawson 1946 in Hoff 2010:31).

The Robertson Land Act of 1861 ushered in a period of clear felling of the 'big scrub' as settlers retained their selections by 'improvements' which necessitated clear felling. Skilled axemen could clear acres of forest at a time by felling 'key' trees which in turn tore down surrounding smaller trees and undergrowth. These 'falls' were left to dry and mostly burned (see Hoff 2010:27).

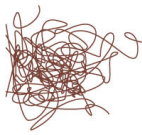
In addition to the above it was common practice for surface stone to be collected and used in the construction of walls and animal pens or thrown into washouts. Removal of small and medium size stone facilitated grass growth. The later activities probably took place at the Project Area pre and post 1900.

From an Aboriginal archaeological site survival point of view it is clear that surface cultural materials under the conditions outlined above, both organic and of stone would be destroyed and scattered.

9.1.1 *Disturbance Rankings*

Morand describes the types of soils of that appear in the Assessment Areas in an exposed state, as prone to slumping along drainage lines and mass movement in certain conditions. Archaeological materials in these circumstances are therefore prone to movement and unlikely to be 'in situ' diminishing scientific significance the material may have had (Morand 1994:82).

In total a range of disturbance 'events' have taken place in the Project Areas both past and present. (McDonald et.al. 1990:88) lists eight broad categories of disturbance ranging between:



1. No effective disturbance other than by grazing by hoofed animals.
2. Limited clearing. E.g. selective logging.
3. Extensive clearing, e.g. poisoning, ringbarking.
4. Complete clearing. Pasture, never cultivated.
5. Complete clearing. Pasture, cultivated at some stage.
6. Cultivation. Rainfed.
7. Cultivation. Irrigation past or present.
8. Highly disturbed for example quarrying, road works, mining, landfill, urban.

The categories of disturbance that have impacted the Project Areas to the best of our knowledge are indicated below. Where a question mark is indicated there is a strong likelihood.

Table 3: Project Area Disturbance Levels

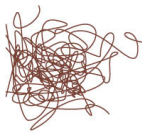
Disturbance Categories:	1	2	3	4	5	6	7	8
West		x	?	x	?			
East		x	?	x	?			

All of the Project Area has undergone land uses constituting 'disturbance' under the meaning of the Due Diligence Code. Applying the Due Diligence Code, it is clear that no further assessment or impact mitigation activities are required.

To devise an archaeological investigation programme to recover archaeological cultural materials from the Project Areas would be purely a speculative, unwarranted exercise.

9.2 Step 2a: Search of AHIMS Database

A search was conducted on 21 January 2016 of the OEH AHIMS for land surrounding the Project Area (with a 1000 metre buffer- Service ID 208377 (Appendix B). No sites are believed to be in close proximity to the Project Area.



9.3 Step 2b: Is the activity in an area where landscape features indicate the presence of Aboriginal cultural heritage?

The Project Area is situated partially on a ridge crest, which when applying the Due Diligence Code warrants careful assessment of its archaeological and cultural heritage potential. Having regard to:

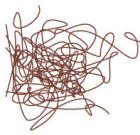
- a) the nature of Aboriginal occupation in the region;
- b) the Project Area's proximity to resources; and
- c) the Project Area's original vegetation, soils and topography.

The desktop review (Section 6) identified a low potential for Aboriginal archaeological materials to be located within the Project Area prior to European settlement. There is debate as to the nature of Aboriginal occupation of rainforest in this region as well as further afield (e.g. Bowdler 1985) (See Section 6). Based on the most recent regional models (Godwin 1999 and Byrne 1987) the Project Area is located within the sub-coastal zone and formed part of the larger Big Scrub rainforest, which whilst utilised by Aboriginal people were not utilised for occupation in the same manner as the more resource rich riverine floodplains, coastal estuaries, coastal plain and beaches. Whilst it is known that Aboriginal people did utilise the resources of rainforests and tall closed forests this use is typically targeted at selected species and does not have a significant archaeological signature.

It must be conceded that the Project Area would fall within the food catchment zones of groups occupying the river flats below the Terranora escarpment but it is not possible to state that the Project Area was suitable for any specific purpose. As the Project Area is located on moderate and steep slopes there are no particular environmental characteristics (proximity to a resource area) that would make the Project Area highly likely to contain Aboriginal objects. Given the disturbances of previous land use practices, it is considered unlikely that any significant deposits of Aboriginal cultural heritage, would exist within the Project Area.

9.4 Additional Steps Aboriginal Heritage

The Project Area has undergone land uses constituting 'disturbance' within the meaning of the Due Diligence Code. Applying the Due Diligence Code, it is clear that while the landscape is disturbed, evidence of cultural materials may survive in the form of isolated artefacts, usually stone, that archaeologists commonly refer to as 'background' scatter, of which as the term implies, there is no means of recovering by other than fortuitous circumstances. The Consultant is of the opinion that given the extent of existing and



historical disturbance over the Project footprint, any future development which arises as a result of the amendment to the TLEP is unlikely to result in significant harm to Aboriginal heritage. As such, no further cultural heritage investigations are warranted.

10. IMPACT AND SIGNIFICANCE ASSESSMENT: HISTORIC HERITAGE

10.1 Significance Criteria and Assessment

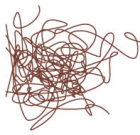
The State Heritage Register is established under Part 3A of the Heritage Act 1977 (as amended in 1999) for listing of items of environmental heritage which are of State heritage significance. Under Section 4 of the Act **State heritage significance**, in relation to a place, building, work, relic, moveable object or precinct, means significance to the State in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item. **Local heritage significance**, in relation to a place, building, work, relic, moveable object or precinct, means significance to an area in relation to the historical, scientific, cultural, social, archaeological, architectural, natural or aesthetic value of the item.

To determine the significance of the Milking Shed and the probable Pig Shed, it must first be assessed in relation to the criterion outlined in the NSW Heritage Manual (Section 2.6). In using these criteria it is important to assess the values first, then the context in which they are significant. Decide the appropriate context by considering similar items of local and State significance in each of these contexts.

Different components of a place may make a different relative contribution to its heritage value. For example, loss of integrity or condition may diminish significance. In some cases it is constructive to note the relative contribution of an item or its components. Table 4 provides an outline as a guide to assessing relative values of significance (NSW Heritage Manual 2001:11).

Table 4: Guide to Grading Heritage Significance

GRADING	JUSTIFICATION	STATUS
Exceptional	Rare or outstanding item of local or State significance.	Fulfils criteria for local or State listing.
High	High degree of original fabric. Demonstrates a key element of the items significance. Alterations do not detract from significance.	Fulfils criteria for local or State listing.



Moderate	Altered or modified elements. Elements with little heritage value, but which contribute to the overall significance of the item.	Fulfils criteria for local or State listing.
Little	Alterations detract from significance. Difficult to interpret	Does not fulfil criteria for local or State listing.
Intrusive	Damaging to the items heritage significance.	Does not fulfil criteria for local or State listing.

10.1.1 *Milking Shed and Probable Pig Shed: Significance Assessment*

The sites consists of two single sheds dating to the early twentieth century although a late nineteenth century provenance cannot be ruled out. The sheds contains features typical of small farm structures dating to the early 1900s where local materials were employed with the exception of concrete and corrugated iron. The condition of the structures is poor with little or no structural integrity. The two sheds are typical of infrastructure of many former farms of the Terranora district although the complex has long since ceased to function as their condition attests. There were no specific features or details of the structure that would appear to resonate with any particular group or community, or that have a particularly well known or remembered association with a particular person or family of importance to the region. As such, Under NSW Heritage Council's heritage significance criteria, the Milking Shed and Pig Shed complex does not meet the criteria for local heritage significance.

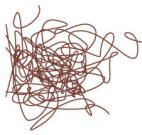
10.2 Additional Steps European Heritage

The significance assessments for the historic heritage features located within the Project Area confirm that these features do not meet the threshold for local significance. As such, no further steps for the management of historic heritage are required

11. RECOMMENDATIONS

11.1 ABORIGINAL CULTURAL HERITAGE

Having regard to the low archaeological potential of the Project Area, the following recommendations are cautionary in nature and considered sufficient for application in both planning proposal and development application stages. No heritage values have been identified that require addressing at the planning proposal stage. Any subsequent Development Applications resulting from the planning proposal changes are unlikely



to impact on Aboriginal cultural heritage. The following recommendation should be applied at Development Application Stage.

Recommendation 1: Aboriginal Objects Find Procedure

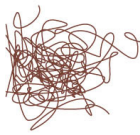
It is recommended that if it is suspected that Aboriginal material has been uncovered as a result of development activities within the Project Area:

- e) work in the surrounding area is to stop immediately;
- f) a temporary fence is to be erected around the site, with a buffer zone of at least 10 metres around the known edge of the site;
- g) an appropriately qualified archaeological consultant is to be engaged to identify the material; and
- h) if the material is found to be of Aboriginal origin, the Aboriginal community is to be consulted in a manner as outlined in the OEH guidelines: *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010).

Recommendation 2: Aboriginal Human Remains

Although it is unlikely that Human Remains will be located at any stage during earthworks within the Project Area, should this event arise it is recommended that all works must halt in the immediate area to prevent any further impacts to the remains. The site should be cordoned off and the remains themselves should be left untouched. The nearest police station (Tweed Heads), the Tweed Byron Local Aboriginal Land Council and the OEH Regional Office (Coffs Harbour) are all to be notified as soon as possible. If the remains are found to be of Aboriginal origin and the police do not wish to investigate the Site for criminal activities, the Aboriginal community and the OEH should be consulted as to how the remains should be dealt with. Work may only resume after agreement is reached between all notified parties, provided it is in accordance with all parties' statutory obligations.

It is also recommended that in all dealings with Aboriginal Human Remains, the Proponent should use respectful language, bearing in mind that they are the remains of Aboriginal people rather than scientific specimens.



Recommendation 3: Notifying the OEH

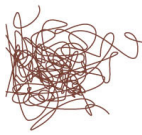
It is recommended that if Aboriginal cultural materials are uncovered as a result of development activities within the Project Area, they are to be registered as Sites in the Aboriginal Heritage Information Management System (AHIMS) managed by the OEH. Any management outcomes for the site will be included in the information provided to the AHIMS.

Recommendation 4: Conservation Principles

It is recommended that all effort must be taken to avoid any impacts on Aboriginal Cultural Heritage values at all stages during the development works. If impacts are unavoidable, mitigation measures should be negotiated between the Proponent, OEH and the Aboriginal community.

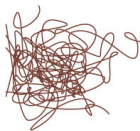
11.2 RECOMMENDATIONS: HISTORIC CULTURAL HERITAGE

Two historic features were located during the survey including two sheds associated with dairying and possibly pig production. The significance assessment in Section 10 confirmed that these features do not meet the threshold for local significance. Archival recording is not considered warranted for these places. As such, no further recommendations for historic heritage are required



12. REFERENCES

- BARZ, R.K. 1980 Report on the Terranora Midden (Lilly Waters Estate)'. Unpublished report to Sinclair Knight & Partners, .Newcastle.
- BRAY, J. 1901. Tribal Districts & Customs. *Science*, Vol. 4, No. 1.
- BRAY, J. 1902. Aboriginal Customs Tweed River District Ceremony. *Science*, February, 1902.
- COLLINS, J 2005, Proposed Country Energy Substation at Cobaki, NSW far North Coast, Cultural Heritage Assessment. Unpublished report to Sinclair Knight Merz, Newcastle
- CREAMER, W. and GODWIN, L. 1984. Ethnography and archaeology on the North Coast of N.S.W. *Queensland Archaeological Research* Vol 1, pp. 103-116.
- CURR, E.M. 1887. *The Australian Race*. Government Printery, Melbourne.
- CROWLEY, T. 1978. The Middle Clarence dialects of the Bundjalung. A.I.A.S., Canberra.
- EVERICK HERITAGE P/L 2009 Draft Preliminary Archaeological Assessment For Precincts 1, 2 and 3, Altitude Development, Terranora, NSW. Unpublished report for Metricon Pty Ltd.
- KEATS W D 1999 McGregor and Cooloon. The Lower Tweed River Historical Society.
- MORAND, D. 1996. Soil Landscapes of the Murwillumbah - Tweed Heads 1:100000Sheet. Dept. of Land & Water Conservation.
- PIPER, A. 1976. Ocean Beach to Mountain Top. The Tweed Valley in Prehistory. B. Litt. Thesis. University of New England.
- PIPER, A. 1980. An Archaeological Survey for Aboriginal Sites and Relics. Banora Point to Terranora, Tweed Valley, N.S.W. Report to N.S.W.N.P.W.S.
- PIPER, A. 1991. Archaeological Assessment in Relation to the Lower Tweed River Management Plan. Unpublished report to N.S.W. Public Works Department, Tweed Heads.
- PIPER, A. 1993. An Archaeological Assessment in Relation to an Upper Tweed River Management Plan. Unpublished report for NSW Public Works Department.
- PIPER, A. 1994. Archaeological Survey at Duroby Creek Road Quarry, Bilambil via Tweed Heads, North Coast, NSW. An unpublished report for Ecotech International, Bangalow, NSW.
- PIPER, A. 2004. Archaeological Assessment at No. 38 McAllisters Road, Bilambil Heights, via Tweed Heads West. A Report for Masterbuilt Pty. Ltd., Round Corner, N.S.W.
- PIPER, A and ROBINS, R 2006 An Archaeological Assessment at Lot 1 DP 595863 and Lot 3 DP Winchelsea Way Terranora, Tweed Heads NSW'. Unpublished report to Buttons with Bows Pty Ltd and Daryl Anderson Consulting Pty Ltd Tweed Heads.

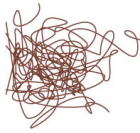


ROBINS, R. and PIPER, A. 2009 Cultural Heritage Assessment for Rise Development, Bilambil Heights, NSW. Everick Consultants unpublished report for Terranora Group Management Pty Ltd.

SHARPE, M. 1985 Bundjalung Settlement and Migration. *Aboriginal History* 1985. Vol 9, no.1

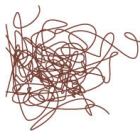
McDONALD, R.C. (et al) 1990. 'Landform' in *Australian Soil and Land Survey Field Handbook*. 2nd Ed., Inkata Press Sydney.

TINDALE, N. 1974. *Aboriginal Tribes of Australia*. A.N.U. Press, Canberra.



APPENDIX A: CORRESPONDANCE WITH ABORIGINAL COMMUNITY

[To be Inserted Upon Receipt]



APPENDIX B: AHIMS EXTENSIVE SEARCH REPORT



AHIMS Web Services (AWS)

Your Ref/PO Number : EV409

Client Service ID : 208377

Note: This Excel report shows the sites found in AHIMS on the 10/03/2016. If this date is not the same as the original date of the Search Results letter obtained during the Basic Search, then the search results might be different.

Site ID	Site name	Datum	Zone	Easting	Northing	Site features	Site types	Recorders
04-2-0006	Terranora 19, BMP-05-0161	AGD	56	552800	6876200	Shell : -, Artefact : -, Burial : -	Burial/s, Midden	F Whitehouse, Mr. Ian Fox
04-2-0008	Restriction applied.							Mr. Adrian Piper, Mr. Ian Fox
04-2-0021	Restriction applied.							Mr. Adrian Piper, Mr. Ian Fox
04-2-0022	Restriction applied.							Mr. Adrian Piper, Mr. Ian Fox
04-2-0023	Restriction applied.							Mr. Adrian Piper, Mr. Ian Fox
04-2-0024	Restriction applied.							Mr. Adrian Piper, Mr. Ian Fox
04-2-0025	Restriction applied.							Mr. Adrian Piper, Mr. Ian Fox
04-2-0026	Restriction applied.							Mr. Adrian Piper, Mr. Ian Fox
04-2-0027	Restriction applied.							Mr. Adrian Piper, Mr. Ian Fox
04-2-0028	Restriction applied.							E. J. Statham, Mr. Ian Fox
04-2-0030	Restriction applied.							Mr. Adrian Piper, Mr. Ian Fox
04-2-0033	Restriction applied.							Mr. Adrian Piper, Mr. Ian Fox
04-2-0157	Restriction applied.							Mr. Ian Fox