Douglas Partners
Geotechnics / Environment / Groundwater

Integrated Practical Solutions

Report on
Preliminary Site Investigation (Contamination)

Proposed Mixed-Use Development
43-46 The Esplanade, Ettalong Beach

Prepared for
Parform Pty Ltd ATF Central Coast Unit Trust

Project 83795.00
April 2020

Douglas Partners
Geotechnics / Environment / Groundwater

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The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

	Signature	Date
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Reviewer		14 April 2020

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1. Introduction

Douglas Partners Pty Ltd (DP) was commissioned by Wales & Associates Pty Ltd to undertake a Preliminary Site Investigation (PSI) for the proposed mixed-use development at 43 – 46 The Esplanade, Ettalong Beach (the site as shown on Drawing 1, Appendix A). The investigation was carried out with reference to DP's Proposal CCT190312, dated 3 September 2019.

It is understood the proposed development is to involve construction of a five-storey mixed-use building with commercial and residential spaces and a single-level basement carpark at RL 1.5 m AHD. Excavations of between 2 m to 3 m will be required for construction of the basement, with the basement covering the majority of the site.

The current investigation comprised a review of site history information, a site walkover, intrusive sampling and laboratory testing for assessment of acid sulfate soils (ASS), and reporting. The purpose of this investigation is to evaluate the contamination status of the site, and to provide an ASS assessment. It should be noted that laboratory analysis of samples for contamination purposes was not undertaken as part of the current investigation.

2. Scope of Works

DP carried out the following scope of works:

- Review of published geological, topographic, hydrogeological and ASS risk maps;
- Review of key site history information including:
  - Available historical aerial photographs;
  - Recent aerial imagery obtained through Nearmap;
  - NSW EPA public registers for notices and licences issued under the Contaminated Land Management Act 1997 (CLM Act) and the Protection of the Environment Operations Act 1997 (PEOA Act);
  - Current and historical land titles; and
  - Relevant council records.
- A site walkover to observe current land use and assess the potential for contaminating activities;
- Drilling of four boreholes (BH1 to BH4) across the site using a ute-mounted push tube rig to a depth of 4 m bgl;
- Collection of soil samples from the boreholes at 0.5 m depth intervals for purposes of ASS screening;

- Screening of select samples for ASS in DP's laboratory using a calibrated pH meter to measure pH in water (H_2O) and hydrogen peroxide (H_2O_2);
- Laboratory analysis of selected soil samples by a National Association of Testing Authorities (NATA) accredited laboratory for chromium reducible sulfur analysis for assessment of ASS; and
- Preparation of this report detailing the findings of the investigation; as well as recommendations for further works, if deemed necessary.

3. Site Description

3.1 Site Identification

The site is located at 43 – 46 The Esplanade, Ettalong Beach within the local government area of Central Coast Council and is identified as follows:

- Lots 117 to 119, Deposited Plan 10650 (46 The Esplanade);
- Lot 120, Deposited Plan 10650 (45 The Esplanade);
- Lot 121, Deposited Plan 10650 (44 The Esplanade); and
- Lot 122, Deposited Plan 10650 (43 The Esplanade)

The site is approximately rectangular in shape and has an area of approximately 0.3 hectares. The site boundary is shown on Drawing 1, Appendix A.

3.2 Site Description

A site walkover was undertaken on 5 March 2020 by an environmental scientist from DP. The walkover was limited to the external grounds / garden areas and did not include an inspection of the internal building areas. Photographs of the site are presented in Appendix B and a summary of the observations is provided below.

Lots 117 to 119

At the time of the walkover, Lots 117 to 119 was occupied by Ettalong Beach Motel, a two-storey building (Photograph 1). The southern portion of the property fronting The Esplanade was predominately grass-covered with a concrete driveway. The rear of the property consisted of an asphaltic concrete car park with limited landscaped areas and a small office / reception building (Photograph 2). The western side of the motel was observed to have minor areas of exposed fill with some building rubble (Photograph 3).

Lots 120 to 121

At the time of the walkover, Lots 120 to 121 was vacant, with the majority of the area covered in tall grass and a few mature trees (Photograph 4). Building rubble including tile, brick and potential asbestos containing material (PACM) was observed on the ground surface (Photographs 5 and 6). There was a mounded area within the central southern portion of Lots 120 and 121 with fragments of PACM and building rubble observed on the surface (Photograph 7).

Lot 122
At the time of the walkover, there was a two-storey brick residential house within Lot 122, which appeared to be un-occupied. The rear of the property was mostly covered in low-lying flowering plants and landscaping gravel (Photograph 8). The front yard, facing The Esplanade was covered in landscaping bark with a few shrubs and ground-cover plants (Photograph 9).

The surrounding land uses are summarised as follows:

- North: an unnamed road, and commercial land use (IGA, The Ettalong pub) beyond;
- East: Picnic Parade and a mix of commercial (holiday/travel centre / RSL club/ Domaine Property Group), and residential land use further east;
- South: The Esplanade and Ettalong Beach beyond; and
- West: Mixed-use development (retail and apartments)

3.3 Soil Landscapes

Reference to the *Sydney 1:100 000 Soils Landscape Sheet* indicates the site is underlain by the Woy Woy (Aeolian) soil landscape (mapping unit ww) characterised by level to gently undulating non-tidal beach ridges on marine sands, with local relief < 3 m, slopes <5%. The soils vary form siliceous sands and occasional podzols on sand rises, humus podzols in poorly drained areas and calcareous sands near beaches. These soils typically have a permanently high water table, localised flooding, periodic water logging in depressions, very low to low soil fertility and localised areas of high soil erosion hazard.

3.4 Geology

Reference to the *Sydney 1:100,000 Geology Sheet* indicates the site is underlain by Quaternary sediments of the Cainozoic era (mapping unit Qhbr) characterised by quartz sand, minor shell content, interdune (swale) silt and fine sand.

3.5 Topography and Hydrogeology

The site lies at an elevation of approximately 4 m AHD as shown on 2 m elevation contours obtained through published topographic maps. The regional topography slopes from the north to Brisbane Water / Ettalong Beach in the south, located approximately 50 m south of the site.

A search of the groundwater bore database maintained by the Department of Primary Industry indicates that there are at least 17 groundwater bores within approximately 500 m of the site, five groundwater bores to the north-east, four to the north, one to the east, four to the north-west and three to the south-west. There are no bores located to the south (inferred hydraulically downgradient) of the site.

3.6 Acid Sulfate Soil Potential

Reference to ASS risk maps indicates the site is mapped as having a low probability of occurrence of acid sulfate soils. However, given the site's elevation (approximately 4 m AHD), assessment of ASS was warranted.

4. Site History

4.1 Historical Aerial Photographs

Historical aerial photographs from 1978 to 2019 were reviewed to identify possible former land uses and hence the potential for contaminating activities to have impacted the site. The aerial photographs are presented in Appendix B. It is noted that data obtained from aerial photos was limited due to the relatively small scale and poor resolutions. For the period 2010 to 2019, Nearmap aerials were reviewed. A summary of the aerial photograph review is given below.

1978 – The historical aerial photograph is of poor resolution. However, it appears that Lots 117 to 119 is occupied by a commercial building (likely to be the existing motel, or similar). There appears to be a structure, likely a residential house within each of lots 120 to 122. The surrounding land use appears to be a mix of commercial and residential land use.

1985 – The aerial photograph is of higher resolution. The site layout of lots 117 to 119 appears much the same as present. The structures within Lots 120 to 122 are more clearly identified as residential houses. The land use immediately north and west appears to be predominately commercial, with some residential land use to the east of the site, and west of Broken Bay Road.

1991 – The historical aerial photograph is of poor resolution. It appears that the residential structures within Lots 120 and 121 observed in the 1985 aerial may have been demolished, although it is difficult to ascertain the detail due to the small scale and resolution. The surrounding land use appears much the same as in 1985.

2003 – Lots 120 and 121 comprises grass covered, vacant land with some trees/shrubs. Lots 117 to 119 and Lot 122 appear much the same as in 1985. The building immediately west of the site, observed since 1978 has been demolished, and has been replaced with a car park. It appears that some earth works / possible demolition activity is being undertaken immediately north of the site.

February 2010 – The site and immediate surrounds appears much the same as in 2003. Immediately north of the site, Ettalong Beach Hotel / The Ettalong has been constructed.

June 2017 –The northern portion of Lot 122 which was previously grass covered is now covered in landscaping gravel. The land immediately west of Ettalong Beach Motel which was used as a carpark is undergoing earthworks activity.

Aug 2017 – The site appears much the same as in June 2017. Construction has commenced within the land immediately west of the Ettalong Beach Motel.

Aug 2018 – The site appears much the same as in August 2017. It is noted that landscaping bark (or similar) has been placed within the front yard of Lot 122. Construction of the building west of the site has progressed.

4.2 NSW EPA Public Registers Search

The EPA maintains a public database of contaminated sites under Section 58 of the CLM Act. The notices relate to investigation and / or remediation of site contamination considered to be significantly contaminated under the definition in the CLM Act.

A site will appear on the Contaminated Land: Record of Notices if the site has been issued a regulatory notice by the EPA. Sites appearing in the List of NSW Contaminated Sites Notified to the EPA indicate that the site is considered to be contaminated by the notifier and warrant reporting to the EPA. However, the contamination may or may not be significant enough to warrant regulation and is subject to further review by the EPA. The NSW EPA also issues environmental protection licenses under Section 308 of the POEO Act.

A search of the EPA website on 23 March 2020 indicated the following:

- No notices or orders made under the CLM Act have been issued for the site or immediately adjacent properties;
- No licences under Schedule 1 of the POEO Act have been issued for the site or immediately adjacent properties; and
- The site and immediately adjacent properties have not been included in the list of NSW contaminated sites notified to EPA.

4.3 Title Deeds

A historical title deeds search was conducted on the site by Infotrack Pty Ltd to obtain information regarding previous land ownership and occupancy details. This information provides an indication of previous land uses and also gives an insight into potential sources of contamination at the site. It should, however, be noted that title deeds alone are not conclusive of land use and need to be used in conjunction with other site history information (e.g. aerial photographs) to gain a better understanding of the likely land use.

Title deeds dating back to 1924 and the 1930s were obtained for Lots 117 to 119, Deposited Plan 10650 and Lots 120 to 122, Deposited Plan 10650, respectively. The full copy of the tile deeds, along with a summarised version is presented in Appendix C.

Based on review of the title deeds, and together with the historical aerial photographs (see Section 4.1), the following is inferred:

- Lots 117 to 119 has been commercial land use since 1924. Parform Pty Limited have been the registered owners of the land since 2003;
- Lot 120 and 121 was likely residential land use from 1933 /1935 to 1991 (or possibly up to 2003), prior to being vacant land; and
- Lot 122 has likely been residential land use since 1930. Oxford Steel Pty Limited have been the registered owners of the land since August 2019.

4.4 Council Records

A search of the Central Coast Council website on 1 April 2020 identified the following applications relating to the site:

- Property No. 46 – A building application "other structures" was lodged and approved in 1985. A footing inspection was undertaken in August 1985;
- Property No. 45 - A development application for a residential flat / building was lodged in March 1993 and approved by Council in November 1993;
- Property No. 44 - A development application for a motel was lodged and approved in 1988. A development application for a residential flat / building was lodged in 1985, 1993, 1994 and 1998. It is noted that in 1999 the application was withdrawn;
- Property No. 43 – No applications were found relating to the property.

5. Preliminary Conceptual Site Model

A Conceptual Site Model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM provides the framework for identifying how the site became contaminated and how potential receptors may be exposed to contamination either in the present or in the future i.e., it enables an assessment of the potential source - pathway - receptor linkages (complete pathways).

Based on the review of the site history information and the site walkover, the following potential sources of contamination and associated contaminants of potential concern (COPC) have been identified and are summarised in Table 1 below.

Table 1: Potential Contamination Sources and Associated Contaminants of Potential Concern

Potential Source	Description of Potential Contaminating Activity	Contaminants of Potential Concern
Fill and surficial soil (S1)	Minor fill is likely to have been placed on the site based on site observations. Since the source of the fill is unknown, there is potential for contaminants to be present in the fill. Based on review of the aerial photographs, the existing structures were built prior to 1990, and the vacant lots (Lot 121 and Lot 121) were previously occupied by residential structures. The demolition/ deterioration of the structures over time may have impacted the surrounding soil. Building rubble including fragments of ACM was observed within the vacant lots during the walkover.	Heavy metals, TPH, BTEX, PAH, PCB, OCP and asbestos
Hazardous building materials in existing structures (S2)	Considering the age of the existing structures, it is considered likely that hazardous building materials, including ACM were used in the construction materials.	Asbestos, lead and PCB

Notes: TPH - total petroleum hydrocarbon
BTEX - benzene, toluene, ethylbenzene, xylene
PAH - polycyclic aromatic hydrocarbons
PCB - polychlorinated biphenyls
OCP - organochlorine pesticides

It is noted that the land use upgradient from the site is commercial land use; however, given the nature of the businesses (e.g. grocery store / pub/ cafes and restaurants), the risk of contamination from off-site sources to the site is considered to be relatively low.

5.1 Potential Receptors

The following potential receptors (R) have been identified:

Human Health Receptors:

R1 - Construction workers (during site redevelopment);

R2 - Future site users; and

R3 - Land users in adjacent areas.

Environmental Receptors:

R4 - Local groundwater;

R5 - Nearby surface water bodies (i.e. Ettalong Beach); and

R6 - Terrestrial ecosystems.

5.2 Potential Pathways

The following potential exposure pathways are primarily relevant to human receptors:

- P1 - Ingestion and dermal contact; and
- P2 - Inhalation of fibres/dust and/or vapours.

The following potential exposure pathways are primarily relevant to environmental receptors:

- P3 - Leaching of contaminants and vertical migration into groundwater;
- P4 - Surface water run-off;
- P5 - Lateral migration of groundwater; and
- P6 - Contact with terrestrial ecology.

5.3 Summary of CSM

A ‘source - pathway - receptor’ approach has been used to assess the potential risks of harm being caused to the identified receptors from contamination sources on or in the vicinity of the site, via exposure pathways (complete pathways). The possible pathways between the above sources (S1 and S2) and receptors are provided in Table 2 below.

Table 2: Conceptual Site Model

Source	Transport Pathway	Receptor	Risk Management Action Recommended
S1: Fill and surficial soil.	P1 – Ingestion and dermal contact.	R1 - Construction workers. R2 – Future site users.	An intrusive investigation of site soils and associated contamination sampling (with respect to the sampling density as per NSW EPA, 1995) is recommended to assess possible contamination issues.
	P2 – Inhalation of fibres/ dust and/or vapours.	R1 - Construction workers. R2 – Future site users. R3 – Land users in adjacent areas.	
	P3 – Leaching of contaminants and vertical migration into groundwater.	R4 – Local groundwater.	
	P4 – Surface water run-off. P5 – Lateral migration of groundwater.	R5 – Surface water bodies.	
	P6 – Contact with terrestrial ecology.	R6 – Terrestrial ecosystems.	
S2: Hazardous building materials in existing structures	P1 – Ingestion and dermal contact.	R1 - Construction workers. R2 – Future site users.	A hazardous materials survey should be conducted prior to demolition Areas beneath the building should be assessed post-demolition.
	P2 – Inhalation of fibres/ dust and/or vapours.	R1 - Construction workers. R2 – Future site users. R3 – Land users in adjacent areas.	

6. Field Work Rationale and Methodology

6.1 Field Work Methods and Rationale

Field work was conducted on 5 March 2020 by an Environmental scientist from DP. The field work comprised the drilling of four boreholes (BH1 to BH4) using a Toyota 4WD mounted push tube rig to a maximum depth of approximately 4 mbgl. The borehole locations are shown on Drawing 1, Appendix A.

Soil samples were collected from all boreholes at regular depth intervals, typically at 0.5 m depth intervals, or changes in the soil profile to facilitate visual inspection, screening and selective laboratory testing of the subsurface conditions. Borehole logs were completed for all boreholes indicating the geological profile observed (refer to Appendix E). Logs included, where relevant, sample identification, coordinates, date of collection, a description of the substrate conditions encountered, visual or olfactory evidence of contamination, the depth of samples collected, the sampler and equipment used.

6.2 Sampling Procedure

Environmental sampling was performed with reference to standard operating procedures outlined in the DP *Field Procedures Manual*. All sampling data was recorded on DP's Chain-of-Custody sheets, and the general sampling procedure comprised:

- Soils were sampled directly from the sampling tube. Disposable nitrile gloves were worn when collecting all samples. Gloves were replaced prior to the collection of each sample in order to minimise the risk of cross-contamination;
- Samples collected for ASS screening were transferred into zip lock bags. A separate zip-lock bag sample was collected for the screening of samples using a photoionisation detector (PID) to screen for the presence of volatile contaminants. The PID was calibrated prior to use with isobutylene at a concentration of 100 ppm;
- Sample bags were labelled with individual and unique identification including project number, sample ID, depth and date of sampling;
- Placement of sample bags into a cooled, insulated and sealed container for transport to the laboratory;
- Use of chain of custody documentation so that sample tracking and custody could be cross-checked at any point in the transfer of samples from the field to the laboratory; and
- Soil samples not analysed were kept in the fridge pending the need for analysis.

7. Field Work Observations

Details of the subsurface conditions encountered are given in the borehole logs in Appendix E, together with notes defining classification methods and descriptive terms. A summary of the ground profile encountered in the current investigation is given below:

ASPHALTIC CONCRETE: to depths of 0.05 m was observed in BH4, drilled within the car park;

FILL: comprised of silty sand / clayey sand was encountered in BH1 to BH3 to depths of up to 0.4 m. A fragment of PACM and building rubble including terracotta, brick and tile fragment was observed in BH2 and BH3. Deeper fill up to depths of 0.85 m was observed in BH4, comprised of road base, underlain by sandy clay and sand fill with trace concrete and igneous gravel. There were no obvious indications of gross contamination such as staining or odours within the bores.

SILTY SAND / SAND: fine grained sand (alluvial) was encountered in all boreholes varying from pale grey-brown / dark grey, pale brown / pale grey, orange brown and yellow brown. Trace shell fragment was observed in all boreholes below depths of approximately 3.0 m.

The PID readings were < 1 ppm, suggesting the general absence of VOC.

Groundwater was measured at depths of 3.2 m, 3.0 m, 3.1 m and 2.5 m in boreholes BH1, BH2, BH3 and BH4, respectively. It should be noted that groundwater levels are variable and can be affected by soil permeability, recent weather conditions, and for this site, potential tidal fluctuations.

8. Acid Sulfate Soil Screening

The results of the ASS screening are referenced primarily against criteria presented in the following guideline:

- NSW Acid Sulfate Soil Management Advisory Committee – *Acid Sulfate Soil Manual*, August 1998 (Stone et al, 1998).

Indicators of ASS from field screening comprise one, or preferably more of the following:

- Field pH / pH in distilled H_2O (pH_F) is less than or equal to 4 pH units. The pH_F (non-oxidised) is a measure of existing acidity;
- pH following addition of H_2O_2 (pH_{Fox}) is less than 3.5 pH units. The pH_{Fox} (oxidised pH) is a measure of potential acidity;
- A decrease of more than 1 pH unit from the pH_F to the pH_{Fox};
- Effervescence including bubbling, production of heat or release of sulfurous odours during pH_{Fox} testing; and
- Change in colour from grey to brown tones during oxidation.

It should be noted the field screening is indicative only and can give false positive (and false negative) indications of the presence of ASS. False positives can be caused by organic matter, which often "froths" during oxidation.

9. Acid Sulfate Soil Screening and Laboratory Results

Soil samples from each borehole (excluding fill samples) were screened for ASS. The results of the ASS screening are shown on Table D1, Appendix D. The initial screening indicated that samples BH2/05, BH2/1.5 and BH3/0.5 exceeded the screening guidelines, with a difference of pH_F and pH_{Fox} ranging from 1.2 to 2.0. Based on the screening results, and also taking into account the observed soil strata, select samples from different depths were selected for further chromium reducibile sulfur suite (S_{Cr}) testing.

The laboratory results of the S_{Cr} testing indicated concentrations of net acidity was below the action criteria (0.03% w/w) in all samples. Furthermore, no detectable oxidisable or soluble suflur was reported in any of the samples tested. Therefore, based on the results of the screening and analytical testing, the soils at the site to the depths of the investigation are not considered to be ASS, and do not require management for ASS. The laboratory certificates of analysis are included in Appendix F.

10. Discussion

Based on review of the site history information, it is evident that the existing residential house within Lot 122 and Ettalong Beach Motel was constructed during or prior to 1978, and that the motel has undergone some alterations over time. Considering the age of the existing structures, it is considered likely that hazardous building materials, including ACM were used in the construction materials. Lots 120 and 121 was previously occupied by residential properties, prior to being demolished. It appears that the land has been vacant since at least 2003, or possibly since 1991 or earlier. During the walkover, building rubble and fragments of PACM was observed on the ground surface and within the mounded area.

The current investigation involved the drilling of four boreholes across the site for assessment of ASS. It should be noted that contamination sampling and analysis was beyond the scope of the present investigation. Fill to depths of up to 0.4 m was encountered in BH1 to BH3, and deeper fill to depths of 0.85 m was encountered in BH4 drilled within the asphalt car park. Building rubble and a fragment of PACM was observed in BH2 and BH3, drilled within the vacant lots.

The natural soil profile comprised alluvial sand / silty sand underlying fill to the depth of the investigation (4 m bgl). At the time of the investigation, groundwater was encountered at depths between 3.0 to 3.2 m in BH1 to BH3, and depths of 2.5 m in BH4. Based on the ASS screening and further laboratory analysis, the natural soils tested were not considered to be ASS.

11. Recommendations

Based on review of the site history information, the walkover, and *in situ* sampling, the site appears to be generally compatible with the proposed mixed-use development (from a site contamination standpoint), subject to completion of the following assessments/remediation actions:

- **Existing Structures:** A pre-demolition hazardous building material survey in accordance with SafeWork NSW requirements is recommended to be conducted by an appropriately qualified occupation hygienist prior to the demolition of the existing structures. All demolition work should be undertaken by a licenced demolition contractor and a clearance certificate provided by an occupational hygienist for the ground surface post demolition;
- **Soil** – An intrusive soil investigation with associated contamination sampling should be conducted to assess the potential for soil contamination. It would be considered appropriate to undertake the further intrusive works following the demolition of the existing structures. It should be noted, in the current investigation, PACM was observed on the ground surface and during drilling (within Lots 120 and 121), which would require remediation prior to site development. The remediation is likely to involve removal of impacted soils followed by off-site disposal; a cap and contain strategy, or an emu-pick, which would be outlined in a remediation action plan (RAP); and
- **Groundwater** – Given the encountered groundwater depth (i.e. 2.5 m to 3.2 m) and the proposed basement level, it is recommended a more detailed assessment of groundwater conditions is completed following confirmation of the proposed development (e.g. proposed basement design levels). Furthermore, should the results of the soil investigation indicate signs of contamination; groundwater testing may be recommended.

12. Limitations

Douglas Partners (DP) has prepared this report for this project at 43-46 The Esplanade in accordance with DP's proposal CCT190312 dated 3 September 2019. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of Parform Pty Ltd for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after DP's field testing has been completed.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

Potential asbestos containing material was detected on the ground surface and building rubble was observed at certain borehole locations. Although the sampling plan adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been sampled and analysed. This is either due to undetected variations in ground conditions or to budget constraints, or to parts of the site being inaccessible and not available for inspection/sampling. It is therefore considered possible that HBM, including asbestos, may be present in unobserved or untested parts of the site, between and beyond sampling locations

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

The contents of this report do not constitute formal design components such as are required, by the Health and Safety Legislation and Regulations, to be included in a Safety Report specifying the hazards likely to be encountered during construction and the controls required to mitigate risk. This design process requires risk assessment to be undertaken, with such assessment being dependent upon factors relating to likelihood of occurrence and consequences of damage to property and to life. This, in turn, requires project data and analysis presently beyond the knowledge and project role respectively of DP. DP may be able, however, to assist the client in carrying out a risk assessment of potential hazards contained in the Comments section of this report, as an extension to the current scope of works, if so requested, and provided that suitable additional information is made available to DP. Any such risk assessment would, however, be necessarily restricted to the environmental components set out in this report and to their application by the project designers to project design, construction, maintenance and demolition.

Douglas Partners Pty Ltd

Appendix A

Notes About This Report

Drawings

About this Report

Douglas Partners

Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

About this Report

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

Locality Plan

Drawing adapted from Nearmap Image, dated 18 Dec 2019

Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT:	Parform Pty Ltd		
OFFICE:	Central Coast	DRAWN BY:	CLN
SCALE:	As shown	DATE:	1/4/2020

TITLE: **Site Boundary and Borehole Locations**
Preliminary Site Investigation
43 - 46 The Esplanade, Ettalong Beach

N

PROJECT No:	83795.00
DRAWING No:	1
REVISION:	0

Appendix B

Site Photographs

Aerial Images

Photo 1 – Lots 117 to119: Ettalong Beach Motel

Photo 2 – Rear car park area

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Preliminary Site Investigation** **43 – 46 The Esplanade, Ettalong Beach**	PROJECT: 83795.00 PLATE No: 1 REV: A
	CLIENT: Parform Pty Ltd	DATE: 5 March 2020

Photo 3 – Western side of Ettalong Beach Motel

Photo 4 – Lots 120 to 121: vacant area covered in tall grass

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Preliminary Site Investigation** **43 – 46 The Esplanade, Ettalong Beach**	PROJECT: 83795.00 PLATE No: 2 REV: A
	CLIENT: Parform Pty Ltd	DATE: 5 March 2020

Photo 5 – Building rubble on ground surface

Photo 6 – Fragment of potential asbestos containing material on ground surface

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Preliminary Site Investigation** **43 – 46 The Esplanade, Ettalong Beach**	PROJECT: 83795.00 PLATE No: 3 REV: A
	CLIENT: Parform Pty Ltd	DATE: 5 March 2020

Photo 7 – Mounded area with building rubble on the surface

Photo 8 – Rear of residential property (No. 43)

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Preliminary Site Investigation** **43 – 46 The Esplanade, Ettalong Beach**	PROJECT: 83795.00 PLATE No: 4 REV: A
	CLIENT: Parform Pty Ltd	DATE: 5 March 2020

Photo 9 – Front yard of No. 43

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs** **Preliminary Site Investigation** **43 – 46 The Esplanade, Ettalong Beach**	PROJECT: 83795.00 PLATE No: 5 REV: A
	CLIENT: Parform Pty Ltd	DATE: 5 March 2020

Photo 1 - 1978

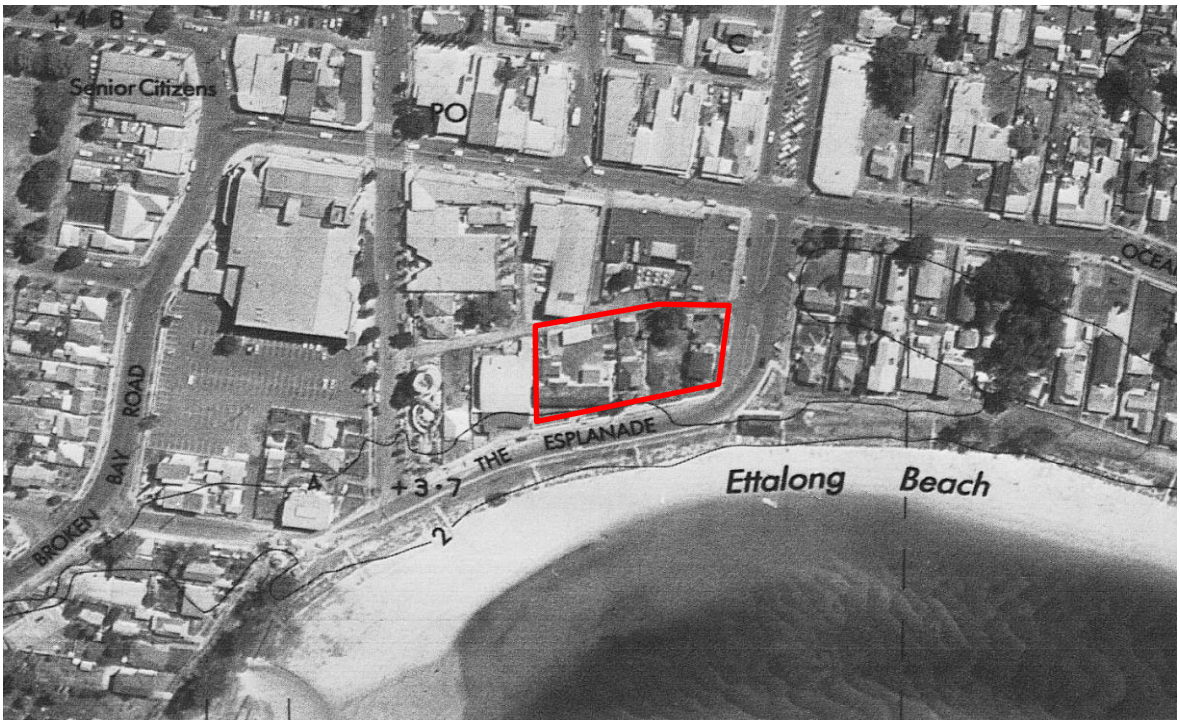


Photo 2 - 1985

Douglas Partners Geotechnics / Environment / Groundwater	**Historical Aerial Photographs**	PROJECT: 83795.00
	Preliminary Site Investigation	PLATE No: 6
	43 - 46 The Esplanade, Ettalong Beach	REV: 0
	CLIENT: Parform Pty Ltd	DATE: 31-Mar-20

Photo 3 - 1991

Photo 4 - 2003

Douglas Partners Geotechnics / Environment / Groundwater	**Historical Aerial Photographs**	PROJECT: 83795.00
	Preliminary Site Investigation	PLATE No: 7
	43 - 46 The Esplanade, Ettalong Beach	REV: 0
	CLIENT: Parform Pty Ltd	DATE: 31-Mar-20

Photo 5 - February 2010

Photo 6 - June 2017

Douglas Partners Geotechnics / Environment / Groundwater	**Historical Aerial Photographs**	PROJECT: 83795.00
	Preliminary Site Investigation	PLATE No: 8
	43 - 46 The Esplanade, Ettalong Beach	REV: 0
	CLIENT: Parform Pty Ltd	DATE: 31-Mar-20

Photo 7 - August 2017

Photo 8 - August 2018

Douglas Partners Geotechnics / Environment / Groundwater	**Historical Aerial Photographs**	PROJECT: 83795.00
	Preliminary Site Investigation	PLATE No: 9
	43 - 46 The Esplanade, Ettalong Beach	REV: 0
	CLIENT: Parform Pty Ltd	DATE: 31-Mar-20

Appendix C

Site History Information

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Report

LRS NSW **Sydney**

Address: - 43 to 49 The Esplanade, Ettalong Beach

Description: - Lots 117 to 122 D.P. 10650

As regards Lots 117, 118 & 119 D.P. 10650

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
01.10.1924 (1924 to 1959)	Hotel Ettalong Limited Now Hotel Ettalong Pty Limited	Vol 3646 Fol 34 Now Vol 6176 Fol 24
02.09.1959 (1959 to 1989)	Tooheys Limited	Vol 6176 Fol 24
03.01.1989 (1989 to 1990)	Bond Brewing New South Wales Limited	Vol 6176 Fol 24
30.05.1990 (1990 to 1992)	Austotel Management Pty Limited	Vol 6176 Fol 24
17.07.1992 (1992 to 1996)	Lyncorporation Pty Limited	Vol 6176 Fol 24 Now Auto Consol 6176-24
12.10.1996 (1996 to 2003)	Konstantinos Xarras Maria Xarras	Auto Consol 6176-24
16.04.2003 (2003 to date)	# Parform Pty Limited	Auto Consol 6176-24

# Denotes current registered proprietor

Leases: -

- Various leases were found from 22.11.1932 that have since expired or have been surrendered – not investigated.

Easements: - NIL

As regards Lot 120 D.P. 10650

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
25.09.1935 (1935 to 1952)	Elizabeth Matilda Smith (Widow)	Vol 4715 Fol 11
25.07.1952 (1952 to 1956)	Robert Richard Smith (Investor) (Transmission Application not investigated)	Vol 4715 Fol 11
10.07.1956 (1956 to 1987)	Minister for Public Works	Vol 4715 Fol 11
19.03.1987 (1987 to 1992)	Her Most Gracious Majesty Queen Elizabeth The Second for and on behalf of the Minister for Police and Emergency Services for the Police Department	Vol 4715 Fol 11 Now 120/10650

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Continued as regards Lot 120 D.P. 10650

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
21.05.1992 (1992 to 2003)	John Stamatakos Vasilios Kametopoulos	120/10650
10.11.2003 (2003 to date)	# Pinti Pty Limited # Saltnpepper Pty Limited	120/10650

# Denotes current registered proprietors

Leases and Easements: - NIL

As regards Lot 121 D.P. 10650

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
30.11.1933 (1933 to 1936)	Lena Leah Beards (Married Woman)	Vol 4602 Fol 44
14.02.1936 (1936 to 1937)	Herbert Potier (Gentleman)	Vol 4602 Fol 44
18.06.1937 (1937 to 1937)	Louisa Marie Potier (Widow) (Transmission Application not investigated)	Vol 4602 Fol 44
14.05.1937 (1937 to 1949)	Godfrey Truscott (Company Director)	Vol 4602 Fol 44
01.06.1949 (1949 to 1957)	Arthur Godfrey Truscott (Company Director) (Transmission Application not investigated)	Vol 4602 Fol 44
09.04.1957 (1957 to 1970)	Reita Mary McArthur (Married Woman)	Vol 4602 Fol 44
29.05.1970 (1970 to 1971)	Elbrook Pty Limited	Vol 4602 Fol 44
28.05.1971 (1971 to 1974)	Denis Francis Andrews (Builder) Ethel Maude Andrews (Married Woman)	Vol 4602 Fol 44
08.11.1974 (1974 to 1988)	Denis Francis Andrews (Builder)	Vol 4602 Fol 44
12.01.1988 (1988 to date)	# John Moussa # Mark Moussa Or # Mark Bazil Moussa	Vol 4602 Fol 44 Now 121/10650

# Denotes current registered proprietors

Leases and Easements: - NIL

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

As regards Lot 122 D.P. 10650

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
23.10.1930 (1930 to 1939)	Frederick John Gibbs (Contractor) Alice Edith Gibbs (Married Woman) Frederick William Clarence Gibbs (Carpenter)	Vol 4445 Fol 64
29.11.1939 (1939 to 1940)	Frederick John Gibbs (Contractor) Frederick William Clarence Gibbs (Carpenter)	Vol 4445 Fol 64
04.11.1940 (1940 to 1959)	George Weimar (Hotelkeeper) Irene Alice Smith (Spinster) Now Irene Alice Weimar (Married Woman)	Vol 4445 Fol 64
21.12.1959 (1959 to 1960)	Irene Alice Weimar (Widow)	Vol 4445 Fol 64
22.04.1960 (1960 to 1987)	Charles Douglas Whan (Builder) Lois May Whan (Married Woman)	Vol 4445 Fol 64
10.11.1987 (1987 to 1994)	Nerida Valerie Wright	Vol 4445 Fol 64 Now 122/10650
26.05.1994 (1994 to 1999)	William George Kelly Beryl Hazel Kelly	122/10650
27.04.1999 (1999 to 2014)	George Karras Despina Karras Kirk Joseph Carol Lynette Joseph	122/10650
27.02.2014 (2014 to 2019)	Pilotimos Enterprises Pty Limited	122/10650
27.08.2019 (2019 to date)	# Oxford Steel Pty Limited	122/10650

# Denotes current registered proprietor

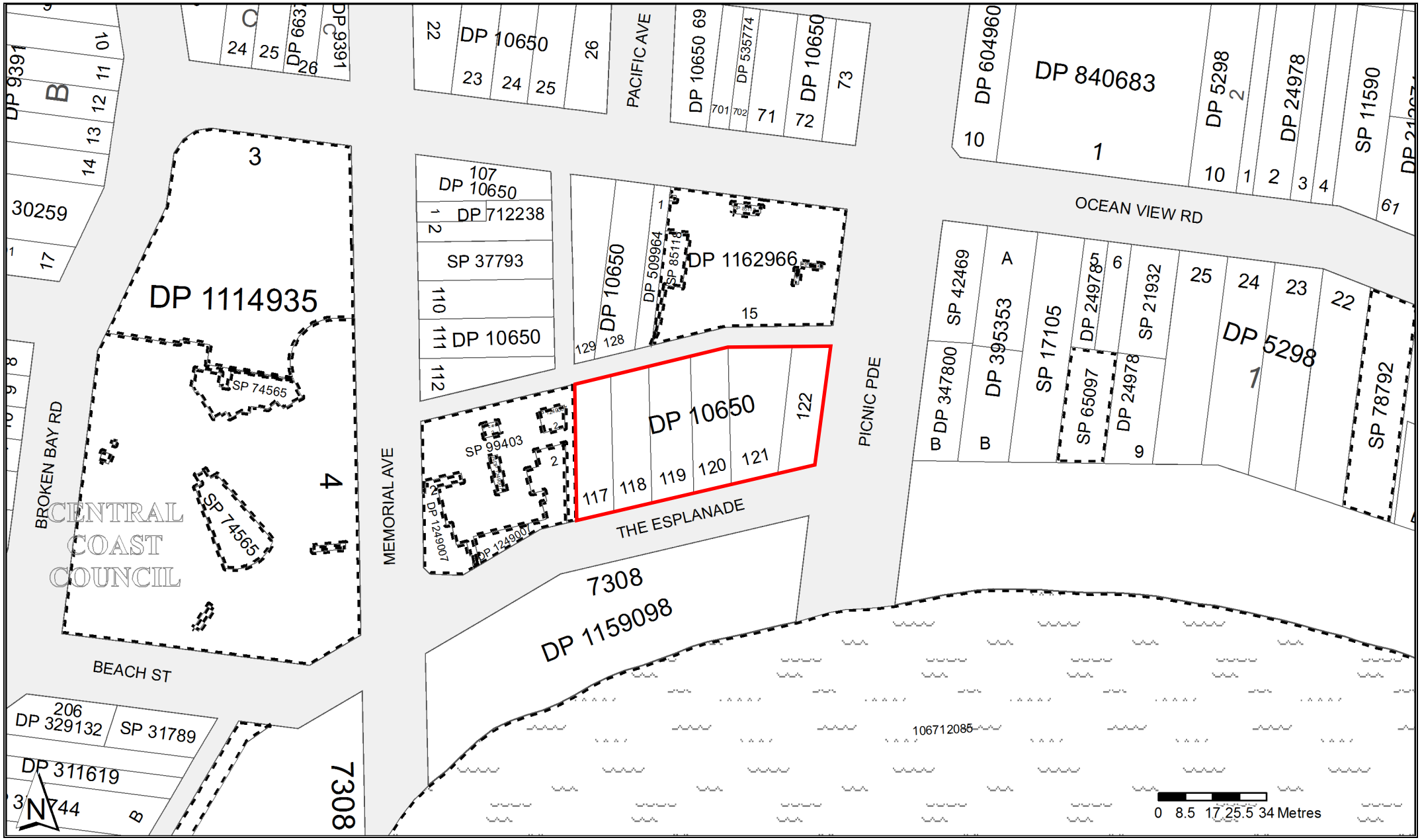
Leases and Easements: - NIL

Yours Sincerely,
Mark Groll
17 December 2019

Cadastral Records Enquiry Report : Lot 120 DP 10650

Ref : Ettalong Beach 43-49 The Esplanade

Locality : ETTALONG BEACH
Parish : PATONGA
LGA : CENTRAL COAST
County : NORTHUMBERLAND



This information is provided as a searching aid only.Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For ALL ACTIVITY PRIOR TO SEPTEMBER 2002 you must refer to the RGs Charting and Reference Maps

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
18/3/2020 12:54PM

FOLIO: AUTO CONSOL 6176-24

Recorded	Number	Type of Instrument	C.T. Issue
8/9/1992		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 6176-24 PARCELS IN CONSOL ARE: 117-119/10650.	
9/9/1992	E746903	DEPARTMENTAL DEALING	EDITION 1
12/1/1996	O834443	DISCHARGE OF MORTGAGE	
12/1/1996	O834444	DISCHARGE OF MORTGAGE	
12/1/1996	O834445	TRANSFER	
12/1/1996	O834446	MORTGAGE	EDITION 2
16/4/2003	9541417	DISCHARGE OF MORTGAGE	
16/4/2003	9541418	TRANSFER	EDITION 3
16/12/2013	AI247013	CAVEAT	
18/9/2015	AJ464481	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 4
2/3/2016	AJ975956	REJECTED - WITHDRAWAL OF CAVEAT	
2/3/2016	AJ975957	REJECTED - LEASE	
2/3/2016	AJ975958	REJECTED - TRANSFER OF LEASE	

*** END OF SEARCH ***

97-01T

TRANSFER

Real Property Act, 1900

0 834445 F

Office of State Revenue use only

N.S.W. STAMP DUTY
241195 9604 04 401599568/03 $2.00

(A) **LAND TRANSFERRED**
Show no more than 20 References to Title.
If appropriate, specify the share transferred.

FOLIO IDENTIFIER AUTO CONSOL 6176-24

(B) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
374	WESTPAC REFERENCE (max. 15 characters):

(C) **TRANSFEROR** LYNCORPORATION PTY LTD ACN: 056 031 031

(D) acknowledges receipt of the consideration of $650,000.00
and as regards the land specified above transfers to the Transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. .... 2. .... 3. ....

(F) **TRANSFEREE**

T

KONSTANTINOS XARRAS and MARIA XARRAS of

(G) **TENANCY:** JOINT TENANTS

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATED** ....

Signed in my presence by the Transferor who is personally known to me.

THE COMMON SEAL of LYNCORPORATION PTY LTD ACN: 056 031 031 was hereunto affixed by authority of the Directors in the presence of:

LYNCORPORATION PTY. LIMITED Common Seal A.C.N. 056 031 031

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Secretary

Signature of Transferor

Director

Signed in my presence by the Transferee who is personally known to

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Signature of Transferee

PETER SKOUTERIS, Solicitor for Transferee

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: AUTO CONSOL 6176-24

SEARCH DATE	TIME	EDITION NO	DATE
18/3/2020	12:52 PM	4	18/9/2015

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
AT ETTALONG
LOCAL GOVERNMENT AREA CENTRAL COAST
PARISH OF PATONGA COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP10650

FIRST SCHEDULE

PARFORM PTY LIMITED (T 9541418)

SECOND SCHEDULE (3 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)

* 2 AI247013 CAVEAT BY ANGEL REAL ESTATE PTY LTD

3 AJ464481 THIS EDITION ISSUED PURSUANT TO S.111 REAL PROPERTY ACT, 1900

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 117-119 IN DP10650.

*** END OF SEARCH ***

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
18/3/2020 12:54PM

FOLIO: 120/10650

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 4715 FOL 11

Recorded	Number	Type of Instrument	C.T. Issue
21/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
27/2/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
21/5/1992	E470344	TRANSFER	
21/5/1992	E470345	MORTGAGE	EDITION 1
2/6/1999	5869518	DEPARTMENTAL DEALING	
24/6/2002	8707405	DEPARTMENTAL DEALING	
26/9/2003	AA11517	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 2
10/11/2003	AA142511	DISCHARGE OF MORTGAGE	
10/11/2003	AA142512	TRANSFER	
10/11/2003	AA142513	MORTGAGE	EDITION 3
9/9/2018	AN695392	DEPARTMENTAL DEALING	EDITION 4 CORD ISSUED
14/2/2019	AP58057	DISCHARGE OF MORTGAGE	EDITION 5

*** END OF SEARCH ***

RP 13 STAMP DUTY

E 470344 N

TRANSFER

REAL PROPERTY ACT, 1900

T | of | R

$

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
CERTIFICATE OF TITLE FOLIO IDENTIFIER 120/10650	WHOLE	CITY OF GOSFORD PARISH OF PATONGA COUNTY OF NORTHUMBERLAND

DESCRIPTION OF LAND Note (a)

TRANSFEROR Note (b)

HER MOST GRACIOUS MAJESTY QUEEN ELIZABETH THE SECOND FOR AND ON BEHALF OF THE MINISTER FOR POLICE AND EMERGENCY SERVICES FOR THE POLICE DEPARTMENT

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $ 185,000.00 and transfers an estate in fee simple in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

JOHN STAMATAKOS AND ERASMIA STAMATAKOS as joint tenants as to one half share and **VASILIOS KAMETOPOULOS** as to the remaining half share

OFFICE USE ONLY PROP

TENANCY Note (e)

~~as joint tenants/tenants in common~~ TENANTS IN COMMON

PRIOR ENCUMBRANCES Note (f)

subject to the following PRIOR ENCUMBRANCES 1. ..... 2. ..... 3. .....

DATE

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION Note (g)

Signed in my presence by the transferor who is personally known to me

Signature of Witness

Peter David KRISTOFFERSON

Name of Witness (BLOCK LETTERS)

of 14-24 College Street Sydney

Address and occupation of Witness

Asset Disposal Officer

Signed in my presence by the transferee who is personally known to me

Note (g)

Signature of Witness

ESMERALDA SIRAS

Name of Witness (BLOCK LETTERS)

76 WELLINGTON ST MASCOT

Address and occupation of Witness

LEGAL SECRETARY.

SIGNED BY ROBERT GEORGE BROWNE DIRECTOR OF PROPERTIES UNDER AUTHORITY DELEGATED BY THE MINISTER FOR POLICE AND EMERGENCY SERVICES

Signature of Transferor

Signature of Transferee

TO BE COMPLETED BY LODGING PARTY Notes (h) and (i)

LODGED BY

COMMONWEALTH SAVINGS BANK
388 GEORGE ST., SYDNEY, N.S.W.
DX No. 1020 SYDNEY. PHONE 227-7576
23L

Ref:

Delivery Box Number 27849108

LOCATION OF DOCUMENTS	CT	OTHER
Herewith.		
In L.T.O. with		
Produced by		

OFFICE USE ONLY

Checked	Passed	REGISTERED - -19
Signed	Extra Fee	

Secondary Directions			
Delivery Directions			

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 120/10650

SEARCH DATE	TIME	EDITION NO	DATE
18/3/2020	12:53 PM	5	14/2/2019

LAND

LOT 120 IN DEPOSITED PLAN 10650
LOCAL GOVERNMENT AREA CENTRAL COAST
PARISH OF PATONGA COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP10650

FIRST SCHEDULE

PINTI PTY LIMITED
SALTNPEPPER PTY LIMITED
AS TENANTS IN COMMON IN EQUAL SHARES (T AA142512)

SECOND SCHEDULE (1 NOTIFICATION)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
18/3/2020 12:54PM

FOLIO: 121/10650

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 4602 FOL 44

Recorded	Number	Type of Instrument	C.T. Issue
21/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
31/8/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
19/10/1993	I728396	MORTGAGE	EDITION 1
31/7/2009	AE873945	DISCHARGE OF MORTGAGE	EDITION 2
2/7/2014	AI703601	CHANGE OF NAME	
2/7/2014	AI703602	MORTGAGE	EDITION 3
2/9/2018	AN678864	DEPARTMENTAL DEALING	EDITION 4 CORD ISSUED

*** END OF SEARCH ***

Received: 18/03/2020 12:54:05

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 121/10650

SEARCH DATE	TIME	EDITION NO	DATE
18/3/2020	12:53 PM	4	2/9/2018

NO CERTIFICATE OF TITLE HAS ISSUED FOR THE CURRENT EDITION OF THIS FOLIO.
CONTROL OF THE RIGHT TO DEAL IS HELD BY COMMONWEALTH BANK OF AUSTRALIA.

LAND

LOT 121 IN DEPOSITED PLAN 10650
LOCAL GOVERNMENT AREA CENTRAL COAST
PARISH OF PATONGA COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP10650

FIRST SCHEDULE

JOHN MOUSSA
MARK BAZIL MOUSSA
AS JOINT TENANTS (CN AI703601)

SECOND SCHEDULE (2 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
2 AI703602 MORTGAGE TO COMMONWEALTH BANK OF AUSTRALIA

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
18/3/2020 12:54PM

FOLIO: 122/10650

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 4445 FOL 64

Recorded	Number	Type of Instrument	C.T. Issue
19/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
16/2/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
28/1/1992	E219435	CAVEAT	
18/2/1992	E258207	CAVEAT	
3/3/1992	E289698	REQUEST	
10/6/1992	E521095	CAVEAT	
10/6/1992	E521096	CAVEAT	
18/4/1994	U77412	REQUEST	
18/4/1994	U77413	REQUEST	
22/4/1994	U194415	WITHDRAWAL OF CAVEAT	
22/4/1994	U194416	WITHDRAWAL OF CAVEAT	
26/5/1994	U297083	TRANSFER	EDITION 1
27/4/1999	5773522	TRANSFER	
27/4/1999	5773523	MORTGAGE	EDITION 2
27/2/2014	AI402396	DISCHARGE OF MORTGAGE	
27/2/2014	AI402397	TRANSFER	
27/2/2014	AI402398	MORTGAGE	EDITION 3
1/9/2018	AN678863	DEPARTMENTAL DEALING	EDITION 4 CORD ISSUED
31/1/2019	AP35040	CAVEAT	
27/8/2019	AP486735	DISCHARGE OF MORTGAGE	
27/8/2019	AP486736	TRANSFER	EDITION 5

*** END OF SEARCH ***

97-01 T

TRANSFER

Real Property Act, 1900

U 297083 E

Office of State Revenue use only

$2.00 B 040594 2003 04 8003872411/03

(A) **LAND TRANSFERRED**

Show no more than 20 References to Title.
If appropriate, specify the share transferred.

FOLIO IDENTIFIER 122/10650

(B) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
1SAU	CCRS
	REFERENCE (max. 15 characters): OF-Kelly

(C) **TRANSFEROR** NERIDA VALERIE WRIGHT

(D) acknowledges receipt of the consideration of $275,000.00

and as regards the land specified above transfers to the Transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. ..... 2. ..... 3. .....

(F) **TRANSFEREE**

T

WILLIAM GEORGE KELLY and BERYL HAZEL KELLY

(G) **TENANCY:** JOINT TENANTS

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATED** .....

Signed in my presence by the Transferor who is personally known to me.

SPepi
Signature of Witness

SANDRA PEPI
Name of Witness (BLOCK LETTERS)

LOT 5 Kyogle Rd Dum Dum via Murwillumbah N.S.W. 2484.
Address of Witness

Nerida Wright
Signature of Transferor

Signed in my presence by the Transferee who is personally known to

.....
Signature of Witness

.....
Name of Witness (BLOCK LETTERS)

.....
Address of Witness

.....
Signature of Transferee

Terrence Michael O'Connor, Solicitor for Transferee

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only) .....

Form: 97-01T
Licence: 10V/0096/96
Edition: 9804

TRANSFER

New South Wales
Real Property Act 1900

5773522B

STAMP DUTY

Office of State Revenue use only

N.S.W. STAMP DUTY
120499 8025 04 00241562703 $2.00

(A) **TORRENS TITLE**

If appropriate, specify the part or share transferred
Folio Identifier 122/10650

(B) **LODGED BY**

LTO Box	Name, Address or DX and Telephone	CODES
23L	CSB Reference (optional): 21312308	T TS (s713) TW (Sheriff)

(C) **TRANSFEROR**

WILLIAM GEORGE KELLY and BERYL HAZEL KELLY

(D) The tranferor acknowledges receipt of the consideration of $ 515,000 and as regards the land specified above transfers to the transferee an estate in fee simple.

(E) Encumbrances (if applicable): 1. 2. 3.

(F) **TRANSFEREE**

GEORGE KARRAS and DESPINA KARRAS as joint tenants as to one half share and KIRK JOSEPH and CAROL LYNETTE JOSEPH as joint tenants as to the remaining half share

(G) **TENANCY:** Tenants in Common

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. **DATE:** 16-4-99

Signed in my presence by the transferor who is personally known to me.

Signature of witness: [signature]

Name of witness: T M O'CONNOR

Address of witness: SOLICITOR. ETTALONG

Signature of transferor: B. Kelly. W G Kelly.

Signed in my presence by the transferee who is personally known to me.

Signature of witness:

Name of witness:

Address of witness:

Signature of transferee: 's Solicitor
JOHN KELVIN HANNAFORD

If signed on the transferee's behalf by a solicitor or licensed conveyancer, show the signatory's full name and capacity below:

All handwriting must be in block capitals.
A set of notes on this form (97-01T-2) is available from the Land Titles Office.

Checked by (LTO use) CB53.

(1)

Form: 01T
Release: 6·1

TRANSFER

New South Wales
Real Property Act 1900

AI402397A

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY Office of State Revenue use only

Office of State Revenue
NSW Treasury
Client No: 2381247 431
Duty: $10.00 Trans No: 7485886
Asst details:

(A) **TORRENS TITLE** 122/10650

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODES
49R	LLPN: 126043B ANZ BANK C/- SAI GLOBAL Property DX 885 SYDNEY 02 9210 0700 Reference: 36788174-PILOTIMOS	T TW

(C) **TRANSFEROR** George KARRAS, Despina KARRAS, Kirk JOSEPH and Carol Lynette JOSEPH

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 860,000.00 and as regards

(E) **ESTATE** the abovementioned land transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** PILOTIMOS ENTERPRISES PTY LIMITED (A.B.N. 80 167 253 849) ✓

(I) **TENANCY:**

DATE

(J) I certify I am an eligible witness and that the transferor signed this dealing in my presence. [See note* below]

Signature of witness:

Name of witness:
Address of witness:

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of transferor: See Annexure "A"

Certified correct for the purposes of the Real Property Act 1900 on behalf of the transferee by the person whose signature appears below.

Signature:

Signatory's name: Michael John SAINSBURY
Signatory's capacity: solicitor

(K) The transferee's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 566636 Full name: Michael John Sainsbury Signature:

** s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.*

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

1303

Annexure between transferors George Karras, Despina Karras, Kirk Joseph and Carol Lynette Joseph AND transferee PILOTIMOS ENTERPRISES PTY LIMITED.

ANNEXURE "A"

I certify that the person signing opposite, with whom I am personally acquainted or as to whose identity I am Otherwise satisfied, signed this instrument in my presence.

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of Witness: X

Signature of transferor:

FULL **Name of Witness:** Diane Stead

Address of Witness: 2/146 Springwood St
Ettalong Beach

DK X

I certify that the person signing opposite, with whom I am personally acquainted or as to whose identity I am Otherwise satisfied, signed this instrument in my presence.

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of Witness: X

Signature of transferor:

FULL **Name of Witness:** Diane Stead

Address of Witness: 2/146 Springwood St.
Ettalong Beach

DK X

I certify that the person signing opposite, with whom I am personally acquainted or as to whose identity I am Otherwise satisfied, signed this instrument in my presence.

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of Witness: X

Signature of transferor:

FULL **Name of Witness:** Diane Stead

Address of Witness: 2/146 Springwood St
Ettalong Beach

KJ X

I certify that the person signing opposite, with whom I am personally acquainted or as to whose identity I am Otherwise satisfied, signed this instrument in my presence.

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of Witness: X

Signature of transferor:

FULL **Name of Witness:** Yvette Maloney

Address of Witness: 863 Swan Bay Rd. Swan Bay
N.S.W

LJ X

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 122/10650

SEARCH DATE	TIME	EDITION NO	DATE
18/3/2020	12:53 PM	5	27/8/2019

LAND

LOT 122 IN DEPOSITED PLAN 10650
LOCAL GOVERNMENT AREA CENTRAL COAST
PARISH OF PATONGA COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP10650

FIRST SCHEDULE

OXFORD STEEL PTY LIMITED (T AP486736)

SECOND SCHEDULE (2 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
2 LAND EXCLUDES MINERALS IN THE GRANT OF PORTION 3

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

Appendix D

Results Summary Table

Table D1 - Results of Laboratory Analysis for ASS Assessment

	Screening Test (as reported by the laboratory)					S $_{CR}$ Full Suite						
Sample Location/ Depth	Strata	pH_F	pH_{FOX}	pH_F - pH_{FOX}	Strength of Reaction	pH_{KCL}	S_{KCL}	S_{CR}	S_{NAS}	Titratable Actual Acidity (TAA)	Acid Neutralising Capacity (ANC)	Sum of Existing and Potential Acidity (Net Acidity)
						pH units				% w/w		% w/w
BH1/0.5	SAND	7.5	7.5	0.0	1							
BH1/1.0	SAND	7.8	7.6	0.2	2							
BH1/1.5	SAND	7.8	7.6	0.2	2							
BH1/2.0	SAND	7.8	7.7	0.1	1							
BH1/2.5	SAND	7.9	7.6	0.3	1							
BH1/3.0	SAND	8.1	8.0	0.1	1							
BH1/3.5	SAND	8.1	8.1	0.0	1							
BH1/4.0	SAND	8.2	8.1	0.1	1							
BH2/0.5	SILTY SAND	7.9	6.4	1.5	1	6.9	<0.005	<0.005	NA	<0.01	0.11	<0.005
BH2/1.0	SAND	7.8	7.3	0.5	2							
BH2/1.5	SAND	8.1	6.9	1.2	1	6.6	<0.005	<0.005	NA	<0.01	<0.05	<0.005
BH2/2.0	SAND	8.1	7.6	0.5	1							
BH2/2.5	SAND	8	7.1	0.9	1							
BH2/3.0	SAND	7.9	6.9	1.0	1	6.9	<0.005	<0.005	NA	<0.01	<0.05	<0.005
BH2/3.5	SAND	8.2	8.1	0.1	1							
BH2/4.0	SAND	8.1	8.1	0.0	1							
BH3/0.5	SAND	7.9	5.9	2.0	1							
BH3/1.0	SAND	7.8	6.8	1.0	2	6.6	<0.005	<0.005	NA	<0.01	<0.05	<0.005
BH3/1.5	SAND	7.9	7.0	0.9	2							
BH3/2.0	SAND	8.1	7.8	0.3	1							
BH3/2.5	SAND	8.1	7.5	0.6	1							
BH3/3.0	SAND	8.0	8.0	0.0	2							
BH3/3.5	SAND	8.1	7.9	0.2	1							
BH3/4.0	SAND	8.2	8.1	0.1	1							
BH4/1.0	SAND	8.1	7.5	0.6	1							
BH4/1.5	SAND	8.0	7.3	0.7	1							
BH4/2.0	SAND	8.0	7.3	0.7	1							
BH4/2.5	SAND	7.9	6.9	1.0	1	6.2	<0.005	<0.005	NA	<0.01	NA	<0.005
BH4/3.0	SAND	8.0	7.6	0.4	1							
BH4/3.5	SAND	8.2	8.2	0.0	1							
BH4/4.0	SAND	8.2	8.1	0.1	1							
AASMAC (1998) Action Criteria												
Screening Levels		≤4	<3.5	>1	-	-	-	-	-	-		
Action Criteria (<1000 t) (coarse texture)												0.03

Notes:

pH_F non-oxidised pH (soil in distilled water) measures existing acidity

pH_{FOX} oxidised pH (soil oxidised in hydrogen peroxide) measures potential acidity

pH_F - pH_{FOX} change in pH - the greater the difference from pH_F to pHfox, the more likely of the soil being PASS

Strength of Reaction chemical reaction may include colour change, effervescence (bubbling), gas evolution, heat and pungent/irritating odour (sulphur dioxide/hydrogen sulphide)

exceeds screening criteria

exceeds action criteria

Appendix E

Logs

Sampling

Sampling is carried out during drilling or test pitting to allow engineering examination (and laboratory testing where required) of the soil or rock.

Disturbed samples taken during drilling provide information on colour, type, inclusions and, depending upon the degree of disturbance, some information on strength and structure.

Undisturbed samples are taken by pushing a thin-walled sample tube into the soil and withdrawing it to obtain a sample of the soil in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

Test Pits

Test pits are usually excavated with a backhoe or an excavator, allowing close examination of the in-situ soil if it is safe to enter into the pit. The depth of excavation is limited to about 3 m for a backhoe and up to 6 m for a large excavator. A potential disadvantage of this investigation method is the larger area of disturbance to the site.

Large Diameter Augers

Boreholes can be drilled using a rotating plate or short spiral auger, generally 300 mm or larger in diameter commonly mounted on a standard piling rig. The cuttings are returned to the surface at intervals (generally not more than 0.5 m) and are disturbed but usually unchanged in moisture content. Identification of soil strata is generally much more reliable than with continuous spiral flight augers, and is usually supplemented by occasional undisturbed tube samples.

Continuous Spiral Flight Augers

The borehole is advanced using 90-115 mm diameter continuous spiral flight augers which are withdrawn at intervals to allow sampling or in-situ testing. This is a relatively economical means of drilling in clays and sands above the water table. Samples are returned to the surface, or may be collected after withdrawal of the auger flights, but they are disturbed and may be mixed with soils from the sides of the hole. Information from the drilling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively low reliability, due to the remoulding, possible mixing or softening of samples by groundwater.

Non-core Rotary Drilling

The borehole is advanced using a rotary bit, with water or drilling mud being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from the rate of penetration. Where drilling mud is used this can mask the cuttings and reliable identification is only possible from separate sampling such as SPTs.

Continuous Core Drilling

A continuous core sample can be obtained using a diamond tipped core barrel, usually with a 50 mm internal diameter. Provided full core recovery is achieved (which is not always possible in weak rocks and granular soils), this technique provides a very reliable method of investigation.

Standard Penetration Tests

Standard penetration tests (SPT) are used as a means of estimating the density or strength of soils and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, Methods of Testing Soils for Engineering Purposes - Test 6.3.1.

The test is carried out in a borehole by driving a 50 mm diameter split sample tube under the impact of a 63 kg hammer with a free fall of 760 mm. It is normal for the tube to be driven in three successive 150 mm increments and the 'N' value is taken as the number of blows for the last 300 mm. In dense sands, very hard clays or weak rock, the full 450 mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form.

- In the case where full penetration is obtained with successive blow counts for each 150 mm of, say, 4, 6 and 7 as:

  4,6,7
  N=13

- In the case where the test is discontinued before the full penetration depth, say after 15 blows for the first 150 mm and 30 blows for the next 40 mm as:

  15, 30/40 mm

The results of the SPT tests can be related empirically to the engineering properties of the soils.

Dynamic Cone Penetrometer Tests / Perth Sand Penetrometer Tests

Dynamic penetrometer tests (DCP or PSP) are carried out by driving a steel rod into the ground using a standard weight of hammer falling a specified distance. As the rod penetrates the soil the number of blows required to penetrate each successive 150 mm depth are recorded. Normally there is a depth limitation of 1.2 m, but this may be extended in certain conditions by the use of extension rods. Two types of penetrometer are commonly used.

- Perth sand penetrometer - a 16 mm diameter flat ended rod is driven using a 9 kg hammer dropping 600 mm (AS 1289, Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.
- Cone penetrometer - a 16 mm diameter rod with a 20 mm diameter cone end is driven using a 9 kg hammer dropping 510 mm (AS 1289, Test 6.3.2). This test was developed initially for pavement subgrade investigations, and correlations of the test results with California Bearing Ratio have been published by various road authorities.

Description and Classification Methods

The methods of description and classification of soils and rocks used in this report are generally based on Australian Standard AS1726:2017, Geotechnical Site Investigations. In general, the descriptions include strength or density, colour, structure, soil or rock type and inclusions.

Soil Types

Soil types are described according to the predominant particle size, qualified by the grading of other particles present:

Type	Particle size (mm)
Boulder	>200
Cobble	63 - 200
Gravel	2.36 - 63
Sand	0.075 - 2.36
Silt	0.002 - 0.075
Clay	<0.002

The sand and gravel sizes can be further subdivided as follows:

Type	Particle size (mm)
Coarse gravel	19 - 63
Medium gravel	6.7 - 19
Fine gravel	2.36 – 6.7
Coarse sand	0.6 - 2.36
Medium sand	0.21 - 0.6
Fine sand	0.075 - 0.21

Definitions of grading terms used are:

- Well graded - a good representation of all particle sizes
- Poorly graded - an excess or deficiency of particular sizes within the specified range
- Uniformly graded - an excess of a particular particle size
- Gap graded - a deficiency of a particular particle size with the range

The proportions of secondary constituents of soils are described as follows:

In fine grained soils (>35% fines)

Term	Proportion of sand or gravel	Example
And	Specify	Clay (60%) and Sand (40%)
Adjective	>30%	Sandy Clay
With	15 – 30%	Clay with sand
Trace	0 - 15%	Clay with trace sand

In coarse grained soils (>65% coarse)
- with clays or silts

Term	Proportion of fines	Example
And	Specify	Sand (70%) and Clay (30%)
Adjective	>12%	Clayey Sand
With	5 - 12%	Sand with clay
Trace	0 - 5%	Sand with trace clay

In coarse grained soils (>65% coarse)
- with coarser fraction

Term	Proportion of coarser fraction	Example
And	Specify	Sand (60%) and Gravel (40%)
Adjective	>30%	Gravelly Sand
With	15 - 30%	Sand with gravel
Trace	0 - 15%	Sand with trace gravel

The presence of cobbles and boulders shall be specifically noted by beginning the description with 'Mix of Soil and Cobbles/Boulders' with the word order indicating the dominant first and the proportion of cobbles and boulders described together.

Soil Descriptions

Cohesive Soils

Cohesive soils, such as clays, are classified on the basis of undrained shear strength. The strength may be measured by laboratory testing, or estimated by field tests or engineering examination. The strength terms are defined as follows:

Description	Abbreviation	Undrained shear strength (kPa)
Very soft	VS	<12
Soft	S	12 - 25
Firm	F	25 - 50
Stiff	St	50 - 100
Very stiff	VSt	100 - 200
Hard	H	>200
Friable	Fr	-

Cohesionless Soils

Cohesionless soils, such as clean sands, are classified on the basis of relative density, generally from the results of standard penetration tests (SPT), cone penetration tests (CPT) or dynamic penetrometers (PSP). The relative density terms are given below:

Relative Density	Abbreviation	Density Index (%)
Very loose	VL	<15
Loose	L	15-35
Medium dense	MD	35-65
Dense	D	65-85
Very dense	VD	>85

Soil Origin

It is often difficult to accurately determine the origin of a soil. Soils can generally be classified as:

- Residual soil - derived from in-situ weathering of the underlying rock;
- Extremely weathered material – formed from in-situ weathering of geological formations. Has soil strength but retains the structure or fabric of the parent rock;
- Alluvial soil – deposited by streams and rivers;
- Estuarine soil – deposited in coastal estuaries;
- Marine soil – deposited in a marine environment;
- Lacustrine soil – deposited in freshwater lakes;
- Aeolian soil – carried and deposited by wind;
- Colluvial soil – soil and rock debris transported down slopes by gravity;
- Topsoil – mantle of surface soil, often with high levels of organic material.
- Fill – any material which has been moved by man.

Moisture Condition – Coarse Grained Soils

For coarse grained soils the moisture condition should be described by appearance and feel using the following terms:

- Dry (D) Non-cohesive and free-running.
- Moist (M) Soil feels cool, darkened in colour.
  Soil tends to stick together.
  Sand forms weak ball but breaks easily.
- Wet (W) Soil feels cool, darkened in colour.
  Soil tends to stick together, free water forms when handling.

Moisture Condition – Fine Grained Soils

For fine grained soils the assessment of moisture content is relative to their plastic limit or liquid limit, as follows:

- ‘Moist, dry of plastic limit’ or ‘w <PL’ (i.e. hard and friable or powdery).
- ‘Moist, near plastic limit’ or ‘w ≈ PL (i.e. soil can be moulded at moisture content approximately equal to the plastic limit).
- ‘Moist, wet of plastic limit’ or ‘w >PL’ (i.e. soils usually weakened and free water forms on the hands when handling).
- ‘Wet’ or ‘w ≈LL’ (i.e. near the liquid limit).
- ‘Wet’ or ‘w >LL’ (i.e. wet of the liquid limit).

Symbols & Abbreviations

Douglas Partners

Introduction

These notes summarise abbreviations commonly used on borehole logs and test pit reports.

Drilling or Excavation Methods

C	Core drilling
R	Rotary drilling
SFA	Spiral flight augers
NMLC	Diamond core - 52 mm dia
NQ	Diamond core - 47 mm dia
HQ	Diamond core - 63 mm dia
PQ	Diamond core - 81 mm dia

Water

▷	Water seep
▽	Water level

Sampling and Testing

A	Auger sample
B	Bulk sample
D	Disturbed sample
E	Environmental sample
U_{50}	Undisturbed tube sample (50mm)
W	Water sample
pp	Pocket penetrometer (kPa)
PID	Photo ionisation detector
PL	Point load strength Is(50) MPa
S	Standard Penetration Test
V	Shear vane (kPa)

Description of Defects in Rock

The abbreviated descriptions of the defects should be in the following order: Depth, Type, Orientation, Coating, Shape, Roughness and Other. Drilling and handling breaks are not usually included on the logs.

Defect Type

B	Bedding plane
Cs	Clay seam
Cv	Cleavage
Cz	Crushed zone
Ds	Decomposed seam
F	Fault
J	Joint
Lam	Lamination
Pt	Parting
Sz	Sheared Zone
V	Vein

Orientation

The inclination of defects is always measured from the perpendicular to the core axis.

h	horizontal
v	vertical
sh	sub-horizontal
sv	sub-vertical

Coating or Infilling Term

cln	clean
co	coating
he	healed
inf	infilled
stn	stained
ti	tight
vn	veneer

Coating Descriptor

ca	calcite
cbs	carbonaceous
cly	clay
fe	iron oxide
mn	manganese
slt	silty

Shape

cu	curved
ir	irregular
pl	planar
st	stepped
un	undulating

Roughness

po	polished
ro	rough
sl	slickensided
sm	smooth
vr	very rough

Other

fg	fragmented
bnd	band
qtz	quartz

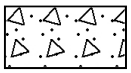
Symbols & Abbreviations

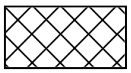
Graphic Symbols for Soil and Rock

General

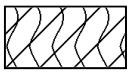

Asphalt

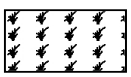

Road base

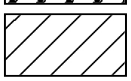

Concrete


Filling

Soils


Topsoil

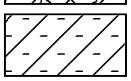

Peat


Clay


Silty clay

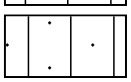

Sandy clay

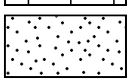

Gravelly clay

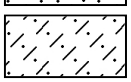

Shaly clay

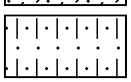

Silt


Clayey silt


Sandy silt

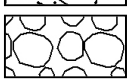

Sand


Clayey sand


Silty sand


Gravel

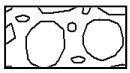

Sandy gravel


Cobbles, boulders

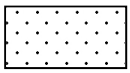

Talus

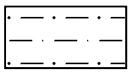
Sedimentary Rocks

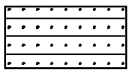

Boulder conglomerate

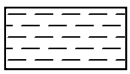

Conglomerate


Conglomeratic sandstone

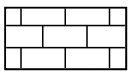

Sandstone


Siltstone

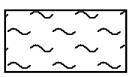

Laminite

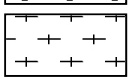

Mudstone, claystone, shale

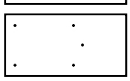

Coal


Limestone

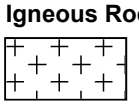
Metamorphic Rocks

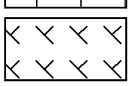

Slate, phyllite, schist

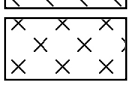

Gneiss

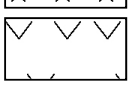

Quartzite

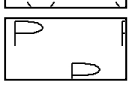
Igneous Rocks


Granite


Dolerite, basalt, andesite


Dacite, epidote


Tuff, breccia


Porphyry

BOREHOLE LOG

CLIENT: Parform P/L ATF Central Coast Unit Trust
PROJECT: Proposed Mixed-Use Development
LOCATION: 43-46 The Esplanade, Ettalong Beach

SURFACE LEVEL: 3.94 AHD
EASTING: 345521.4
NORTHING: 6290445
DIP/AZIMUTH: 90°/--

BORE No: BH1
PROJECT No: 83795.00
DATE: 5/3/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
3	0.2	FILL/Silty Sand: fine grained; grey-brown; trace igneous gravel, sub-angular; moist; fill		D/E	0.1		PID<1ppm		
		SAND SW: fine grained; well graded; pale grey-brown; moist; alluvial		D/E	0.5		PID<1ppm		
		- At 0.5m: grading to pale brown							
		- At 0.85m: grading to orange-brown							
2	1			D/E	1.0		PID<1ppm		1
				D/E	1.5		PID<1ppm		
	2	- At 2.0m: grading to yellow-brown		D/E	2.0		PID<1ppm		2
				D/E	2.5		PID<1ppm		
1	2.9	SAND SW: fine grained; yellow-brown; trace shell fragments; moist; alluvial		D/E	3.0		PID<1ppm	▼	3
	3			D/E	3.5		PID<1ppm		
0	4	4.0 Bore discontinued at 4.0m - limit of investigation		D/E	4.0		PID<1ppm		4
-1									

RIG: Toyota 4WD **DRILLER:** MJH **LOGGED:** CLN **CASING:**
TYPE OF BORING: 60mm Ø Dynamic Continous Push Tube Sampling
WATER OBSERVATIONS: Groundwater measured at 3.2m depth
REMARKS: Location coordinates are in MGA94 Zone 56 H.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Parform P/L ATF Central Coast Unit Trust
PROJECT: Proposed Mixed-Use Development
LOCATION: 43-46 The Esplanade, Ettalong Beach

SURFACE LEVEL: 4.00 AHD
EASTING: 345503.7
NORTHING: 6290439.6
DIP/AZIMUTH: 90°/--

BORE No: BH2
PROJECT No: 83795.00
DATE: 5/3/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILL/Clayey SAND: fine grained; orange-brown; trace brick, sandstone gravel, tile fragment; moist; fill		D/E	0.2		PID<1ppm		
	0.25	FILL/SAND: fine grained, grey-brown; fragment of potential asbestos containing material; moist; fill		D/E	0.3		PID<1ppm		
	0.4	Silty SAND SM: fine grained, well graded; dark grey; moist; alluvial		D/E	0.5		PID<1ppm		
		- At 0.6m: grading to pale grey							
	0.85	SAND SW: fine grained, well graded; orange-brown; moist; alluvial		D/E	1.0		PID<1ppm		
3	1			D/E	1.5		PID<1ppm		1
				D/E	2.0		PID<1ppm		
2	2	- At 2.0m: grading to yellow-brown							2
				D/E	2.5		PID<1ppm		
	2.9	SAND SW: medium grained; well graded; yellow-brown; trace shell fragments; moist		D/E	3.0		PID<1ppm	▼	
1	3								3
		- At 3.5m: grading to fine grained		D/E	3.5		PID<1ppm		
0	4	4.0 Bore discontinued at 4.0m - limit of investigation		D/E	4.0		PID<1ppm		4

RIG: Toyota 4WD **DRILLER:** MJH **LOGGED:** CLN **CASING:**
TYPE OF BORING: 60mm Ø Dynamic Continous Push Tube Sampling
WATER OBSERVATIONS: Groundwater measured at 3.0m depth
REMARKS: Location coordinates are in MGA94 Zone 56 H.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Parform P/L ATF Central Coast Unit Trust
PROJECT: Proposed Mixed-Use Development
LOCATION: 43-46 The Esplanade, Ettalong Beach

SURFACE LEVEL: 3.78 AHD
EASTING: 345489.2
NORTHING: 6290421.8
DIP/AZIMUTH: 90°/--

BORE No: BH3
PROJECT No: 83795.00
DATE: 5/3/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
		FILL/ SAND: fine grained; grey-brown, trace terracotta, gravel, potential asbestos containing material; moist		D/E	0.2		PID<1ppm		
	0.3	SAND SW: fine grained; well graded; pale grey; moist; alluvial							
		- At 0.45m: grading to yellow-brown		D/E	0.5		PID<1ppm		
		- At 0.8m: grading to orange-brown							
	1			D/E	1.0		PID<1ppm		1
				D/E	1.5		PID<1ppm		
	2	- At 2.0m: grading to yellow-brown		D/E	2.0		PID<1ppm		2
				D/E	2.5		PID<1ppm		
	2.9	SAND SW: medium grained; well graded; yellow-brown; trace shell fragments; moist		D/E	3.0		PID<1ppm	▼	3
				D/E	3.5		PID<1ppm		
	4 4.0	Bore discontinued at 4.0m - limit of investigation		D/E	4.0		PID<1ppm		4

RIG: Toyota 4WD **DRILLER:** MJH **LOGGED:** CLN **CASING:**
TYPE OF BORING: 60mm Ø Dynamic Continous Push Tube Sampling
WATER OBSERVATIONS: Groundwater measured at 3.1m depth
REMARKS: Location coordinates are in MGA94 Zone 56 H.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U$_x$	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Parform P/L ATF Central Coast Unit Trust
PROJECT: Proposed Mixed-Use Development
LOCATION: 43-46 The Esplanade, Ettalong Beach

SURFACE LEVEL: 4.08 AHD
EASTING: 345462.4
NORTHING: 6290425
DIP/AZIMUTH: 90°/--

BORE No: BH4
PROJECT No: 83795.00
DATE: 5/3/2020
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing: Type	Depth	Sample	Results & Comments	Water	Well Construction Details
4	0.05	ASPHALTIC CONCRETE		D/E	0.1		PID<1ppm		
	0.15	FILL / Gravelly SAND: poorly graded; grey; moist; roadbase		D/E	0.2		PID<1ppm		
	0.35	FILL/Sandy CLAY : low plasticity; orange-brown; trace ironstone gravel; w>PL; fill							
		FILL/SAND: fine grained; grey-brown; trace concrete, igneous gravel; moist; fill		D/E	0.5		PID<1ppm		
	0.85	SAND SW: fine grained; well graded; orange-brown; moist; alluvial		D/E	1.0		PID<1ppm		1
3	1			D/E	1.5		PID<1ppm		
	2			D/E	2.0		PID<1ppm		2
2		- At 2.2m: grading to yellow-brown		D/E	2.5		PID<1ppm	▼	
	3			D/E	3.0		PID<1ppm		3
1	3.1	SAND SW: medium grained; well graded; yellow-brown; trace shell fragments; moist		D/E	3.5		PID<1ppm		
	4			D/E	4.0		PID<1ppm		4
0	4.0	Bore discontinued at 4.0m - limit of investigation							

RIG: Toyota 4WD **DRILLER:** MJH **LOGGED:** CLN **CASING:**
TYPE OF BORING: 60mm Ø Dynamic Continous Push Tube Sampling
WATER OBSERVATIONS: Groundwater measured at 2.5m depth
REMARKS: Location coordinates are in MGA94 Zone 56 H.

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U_x	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Appendix F

Laboratory Certificates of Analysis and Chain-of-Custody Documentation

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 238898

Client Details

Client	Douglas Partners Tuggerah
Attention	Chamali Nagodavithane
Address	Unit 5, 3 Teamster Close, Tuggerah, NSW, 2259

Sample Details

Your Reference	**83795.00, Ettalong Beach**
Number of Samples	5 Soil
Date samples received	16/03/2020
Date completed instructions received	16/03/2020

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

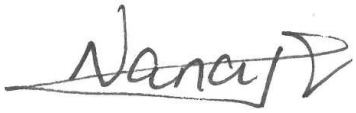
Date results requested by	23/03/2020
Date of Issue	20/03/2020

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Priya Samarawickrama, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

Chromium Suite						
Our Reference		238898-1	238898-2	238898-3	238898-4	238898-5
Your Reference	UNITS	BH2/0.5	BH2/1.5	BH2/3.0	BH3/1.0	BH4/2.5
Depth		0.5	1.5	3.0	1.0	2.5
Date Sampled		05/03/2020	05/03/2020	05/03/2020	05/03/2020	05/03/2020
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	17/03/2020	17/03/2020	17/03/2020	17/03/2020	17/03/2020
Date analysed	-	17/03/2020	17/03/2020	17/03/2020	17/03/2020	17/03/2020
pH $_{kcl}$	pH units	6.9	6.6	6.9	6.6	6.2
s-TAA pH 6.5	%w/w S	<0.01	<0.01	<0.01	<0.01	<0.01
TAA pH 6.5	moles H^+ /t	<5	<5	<5	<5	<5
Chromium Reducible Sulfur	%w/w	<0.005	<0.005	<0.005	<0.005	<0.005
a-Chromium Reducible Sulfur	moles H^+ /t	<3	<3	<3	<3	<3
S_{HCl}	%w/w S	NA	NA	NA	NA	NA
S_{KCl}	%w/w S	<0.005	<0.005	<0.005	<0.005	<0.005
S_{NAS}	%w/w S	NA	NA	NA	NA	NA
ANC_{BT}	% $CaCO_3$	0.35	0.05	<0.05	<0.05	NA
s-ANC_{BT}	%w/w S	0.11	<0.05	<0.05	<0.05	NA
s-Net Acidity	%w/w S	<0.005	<0.005	<0.005	<0.005	<0.005
a-Net Acidity	moles H^+ /t	<5	<5	<5	<5	<5
Liming rate	kg $CaCO_3$ /t	<0.75	<0.75	<0.75	<0.75	<0.75
a-Net Acidity without ANCE	moles H^+ /t	<5	<5	<5	<5	<5
Liming rate without ANCE	kg $CaCO_3$ /t	<0.75	<0.75	<0.75	<0.75	<0.75
s-Net Acidity without ANCE	%w/w S	<0.005	<0.005	<0.005	<0.005	<0.005

Method ID	Methodology Summary
Inorg-068	Chromium Reducible Sulfur - Hydrogen Sulfide is quantified by iodometric titration after distillation to determine potential acidity. Based on Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004.

QUALITY CONTROL: Chromium Suite						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			17/03/2020	1	17/03/2020	17/03/2020		17/03/2020	[NT]
Date analysed	-			17/03/2020	1	17/03/2020	17/03/2020		17/03/2020	[NT]
pH $_{kcl}$	pH units		Inorg-068	[NT]	1	6.9	6.9	0	92	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-068	<0.01	1	<0.01	<0.01	0	[NT]	[NT]
TAA pH 6.5	moles H^+ /t	5	Inorg-068	<5	1	<5	<5	0	85	[NT]
Chromium Reducible Sulfur	%w/w	0.005	Inorg-068	<0.005	1	<0.005	<0.005	0	[NT]	[NT]
a-Chromium Reducible Sulfur	moles H^+ /t	3	Inorg-068	<3	1	<3	<3	0	113	[NT]
S_{HCl}	%w/w S	0.005	Inorg-068	<0.005	1	NA	NA		[NT]	[NT]
S_{KCl}	%w/w S	0.005	Inorg-068	<0.005	1	<0.005	<0.005	0	[NT]	[NT]
S_{NAS}	%w/w S	0.005	Inorg-068	<0.005	1	NA	NA		[NT]	[NT]
ANC_{BT}	% $CaCO_3$	0.05	Inorg-068	<0.05	1	0.35	0.42	18	[NT]	[NT]
s-ANC_{BT}	%w/w S	0.05	Inorg-068	<0.05	1	0.11	0.14	24	[NT]	[NT]
s-Net Acidity	%w/w S	0.005	Inorg-068	<0.005	1	<0.005	<0.005	0	[NT]	[NT]
a-Net Acidity	moles H^+ /t	5	Inorg-068	<5	1	<5	<5	0	[NT]	[NT]
Liming rate	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	1	<0.75	<0.75	0	[NT]	[NT]
a-Net Acidity without ANCE	moles H^+ /t	5	Inorg-068	<5	1	<5	<5	0	[NT]	[NT]
Liming rate without ANCE	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	1	<0.75	<0.75	0	[NT]	[NT]
s-Net Acidity without ANCE	%w/w S	0.005	Inorg-068	<0.005	1	<0.005	<0.005	0	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Holding time exceedance

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CHAIN OF CUSTODY DESPATCH SHEET

Project No: 83795.00	**Suburb:** Ettalong Beach	**To:** Envirolab Services Sydney	
Project Name: Ettalong Beach	**Order Number**		
Project Manager: Chamali Nagodavithane	**Sampler:** CLN	**Attn:** Aileen Hie	
Emails: Chamali.Nagodavithane@douglaspartners.com.au		**Phone:**	
Date Required: Same day ☐ 24 hours ☐ 48 hours ☐ 72 hours ☐ Standard ☑		**Email:** ahie@envirolab.com.au	
Prior Storage: ☐ Esky ☐ Fridge ☐ Shelved	Do samples contain 'potential' HBM? Yes ☐ No ☐ (If YES, then handle, transport and store in accordance with FPM HAZID)		

Sample ID	Lab ID	Date Sampled	Sample Type (S - soil, W - water)	Container Type (G - glass, P - plastic)	Analytes: Chromium Reducibility (complete suite)									Notes/preservation
BH2/0.5	1	05/03/20	S	P	x									
BH2/1.5	2	05/03/20	S	P	x									
BH2/3.0	3	05/03/20	S	P	x									
BH3/1.0	4	05/03/20	S	P	x									
BH4/2.5	5	05/03/20	S	P	x									
														HOLD
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐	

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container: | **Relinquished by:** | **Transported to laboratory by:**

Send Results to: Douglas Partners Pty Ltd | **Address** | **Phone:** | **Fax:**

Signed: Chamali Nan | **Received by:** BQ | **Date & Time:** 16/3/2020 1201

COC 16/3/2020 12.01.

Samples 13/3/2020 10.47

ENVIROLAB

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 238898
Date Received: 16/3/2020
Time Received: 1201
Received by: PL
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None