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Integrated Practical Solutions

Report on
Preliminary Site Assessment (Contamination)

Proposed Upgrading of Facilities
Medowie Christian School
Waropara Road, Medowie

Prepared for
Medowie Christian School Ltd

In consultation with
EPM Projects Pty Ltd

Project 81808.00
December 2015



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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
Author	4 December 2015
Reviewer	4 December 2015



Douglas Partners Pty Ltd
 ABN 75 053 980 117
www.douglaspartners.com.au
 15 Callistemon Close
 Warabrook NSW 2304
 PO Box 324
 Hunter Region MC NSW 2310
 Phone (02) 4960 9600
 Fax (02) 4960 9601

Executive Summary

This report presents the results of a preliminary site assessment (PSA) for contamination undertaken for the proposed upgrading of facilities at Medowie Christian School, Waropara Road, Medowie. The area of assessment is the developed area within the western two-thirds, approximately, of Lot 22 in DP1036306. This area covers approximately 230 m by 100 m.

The assessment comprised a brief desktop review of site history, site inspection by a senior engineer and preparation of this report.

The assessment has been undertaken with reference to the National Environment Protection (Assessment of Site Contamination) Measure 1999 amended 2013 (NEPC 2013) and the State Environmental Planning Policy No 55 – Remediation of Land.

The results of the historical aerial photo review have identified that the main potential for contamination at the site is from possible importation of filling.

On the basis of the desktop review, available site history information and observations made during the site inspection, the sources of potential contamination for the site appear to be limited to importation of filling to the site, or excavation and placement of material won from site to form the level areas and the detention pond embankments and possible application of herbicides and pesticides during weed control around the school grounds.

Although there were no visual or olfactory signs of gross contamination (i.e. no obvious staining or odour) observed on site or within the test bores undertaken for the concurrent geotechnical investigation, the presence of fill materials indicated that contamination may be present at the site. The presence or absence of contamination can only be confirmed by further investigation including environmental sampling and chemical testing. However, the potential areas of environmental concern were generally localised and associated with near surface impacts, which would be readily addressed through appropriate investigation, and remediation (where required). It is noted that intrusive sampling and testing was not conducted for this PSA.

It is considered that the areas of potential contamination identified, once assessed and remediated, if necessary, will be suitable for the proposed land use.

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Report on Preliminary Site Assessment (Contamination)

Proposed Upgrade of Facilities

Medowie Christian School, Waropara Road, Medowie

1. Introduction

This report presents the results of a preliminary site assessment (PSA) for contamination undertaken for the proposed upgrading of facilities at Medowie Christian School, Waropara Road, Medowie. The investigation was commissioned by Medowie Christian School Ltd and was undertaken in consultation with EPM Projects Pty Ltd, managers for the project. The investigation was undertaken in accordance with Douglas Partners Pty Ltd (DP) proposal NCL150561/2 dated 18 September 2015.

For the purposes of the assessment, the client supplied DP with a number of drawings showing the future staging of the development. In summary, the proposed development includes construction of several new buildings and car parking areas.

The assessment comprised the following:

- A brief desktop review of site history;
- Site inspection on 23 September 2015 by a senior engineer from DP; and
- Preparation of this report which presents the findings of the assessment.

The assessment has been undertaken with reference to the National Environment Protection (Assessment of Site Contamination) Measure 1999 amended 2013 (NEPC 2013) [Ref 1] and the State Environmental Planning Policy No 55 – Remediation of Land (Ref 3).

DP has undertaken a concurrent geotechnical investigation for the proposed new administration building and car park, the results of which have been presented under a separate cover (Ref 2).

Relevant results from the subsurface investigation associated with the geotechnical investigation have been included in this report.

2. Site Description

The site is located within the Medowie Christian School, Waropara Road, Medowie (refer Figure 1 below) and is identified as containing Lot 22 in DP 1036306, Lot 1 in DP 868525 and Lot 23 in DP 1036306. The assessment was limited to Lot 22 in DP 1036306.



Figure 1: Aerial image of school site

Lot 22 is roughly rectangular and covers an area of approximately 4 hectares. The area of assessment is the developed area within the western two-thirds, approximately, of Lot 22. This area covers approximately 230 m by 100 m.

The area of assessment has been developed with existing school facilities, whereas the eastern roughly one-third of Lot 22 is undeveloped and covered with trees. It is surrounded by undeveloped and semi-developed land, with an existing church and car park to the south and cleared land to the east.

The ground surface generally falls to the north-east at slopes in the order of 5°.

The remainder of the site beyond the area of assessment was generally covered with dense bushland with the exception of the south-western corner which contained an existing church, associated sealed car parking areas and a detached second building.

3. Regional Geology and Acid Sulfate Soil Mapping

The 1:250,000 Geological Survey of New South Wales, Statewide geodatabase indicates that the site is underlain by the Tomago Coal Measures, which generally comprise sandstone, siltstone, claystone and coal.

Reference to the Acid Sulfate Soil Risk Map prepared by the Department of Land and Water Conservation (DLWC) for the area indicates that the site lies in an area of no known occurrence of acid sulfate soils.

4. Hydrogeology

The regional groundwater flow direction is believed to be locally to the north-east towards that existing drain and possibly to the south-west within the larger region towards Grahamstown Dam.

An on-line records search of groundwater wells registered with the NSW Office of Water indicated that the nearest registered groundwater wells are located approximately 600 m to the south of the site (Bore GW035926). This bore is registered for “domestic” and “irrigation” purposes in 1971 and review of the drilling records indicate that groundwater was encountered at 7.6 m depth. Surface elevation at the bore was not recorded.

5. Site History

5.1 Extent of Site History Review

The brief site history review comprised the following:

- Discussion with personnel familiar with the site;
- Search for historical title deeds;
- Review of historical aerial photos; and
- Searches with the NSW Environmental Protection Authority (EPA).

Details are presented in Sections 5.2 to 5.5.

5.2 Discussion with site personnel

During the site inspection by a senior engineer from DP discussion was undertaken with the Principal and grounds-person. The following information was provided in relation to the site:

- The eastern area of the site has been undeveloped since operation of the school;
- The school was opened in 2003;
- Spraying of weeds was being undertaken at the time of inspection; and
- Some cut and fill operations have been undertaken during development of the school.

5.3 Historical Title Search

A historic title deeds search was carried out by Legal Liaison Searching Services, the results of which are provided in Appendix B and summarised in Table 1 below.

Table 1: Historic Title Search Results – Lot 22 in DP 1036306

Date of Acquisition and Term held	Registered Proprietor(s) & occupations where available
24.01.1914 (1914 to 1935)	Closer Settlement Lands
18.01.1935 (1935 to 1966)	Joseph Michael Aloysius Feenan (Labourer) Daisy Georgina Feenan (Married Woman)
02.02.1966 (1966 to 1972)	James Henry Wilkinson (Storeman & Packer)
27.03.1972 (1972 to 1980)	Anthony George Pty Limited
13.10.1980 (1980 to 2002)	Council of the Shire of Port Stephens
28.03.2002 (2002 to date)	# Medowie Christian School Limited

Notes to Table 1:

Denotes current property owner

No leases were identified by the search.

A restriction on the use of land relating to fencing, posts, swimming pool, detention basin or pond, together with clearing of trees applies.

5.4 Review of Historical Aerial Photos

The historical aerial photos reviewed for the assessment are presented in Table 2 together with the main observations.

Table 2: Historical Aerial Photo Review

Year	Scale (Colour)	Main Observations
1975	1:40 000 (B & W)	No development visible on the site, which is covered by trees. Waropara Road is not visible. Surrounding land is predominantly undeveloped with the exception of the land to the south, which appears to have a building in the position of the present building.
1998	1:40,000 (colour)	Similar to 1975 aerial photo and the site remains undeveloped. Some changes are noted in the surrounding area, as follows: - Waropara Road is visible to the west - More development appears to be present at the site to the south.
2001	1:25,000 (Colour)	Similar to 1975 aerial photo and site remains undeveloped. Car park visible on the site to the south.
2004	1:25,000 (Colour)	The middle section of the site had been developed with the construction of a number of buildings in the position of existing buildings present at the site today. Clearing of trees is visible to the north-east of the buildings in the general area of the detention basin which is present today.
2005 Google Earth	Not to scale (Colour)	Similar to 2004 aerial photo however a building had been constructed in the area towards the centre of the site and the entrance driveway and car parking area in the south-western corner visible.
2007 Google Earth	Not to scale (Colour)	Similar to 2005 Google Earth image.
2010 Google Earth	Not to scale (Colour)	Similar to 2007 Google Earth image with a number of additional buildings, including the multi-purpose hall, textile and art building and a number of additions to former building areas.
2014 Google Earth	Not to scale (Colour)	Similar to 2010 Google Earth image with a number of additional infill developments.

It is noted that data obtained from aerial photos was limited due to the relatively small scale and poor resolutions.

The results of the historical aerial photo review have identified that the main potential for contamination at the site is from possible importation of filling.

5.5 NSW EPA Search

A review of the NSW EPA public registers indicated the following:

- The site is not on the NSW EPA Contaminated Land Management Register;

- The site is not on the list of contaminated sites notified to NSW EPA; and
- Neither the site nor any nearby sites are on the Protection of the Environment Operations Act list for licences, notices etc.

5.6 Geotechnical Investigation

The concurrent geotechnical investigation included the drilling of three bores within the south-western and northern area of the school grounds as shown on Drawing 1 in Appendix C. The bores were drilled to depths ranging from 1.5 m to 8.95 m. Conditions encountered in the bores included some near surface filling underlain by residual clay soils.

Where encountered, the filling was generally clayey sand or sandy clay, which may have been sourced from excavations elsewhere on the site. No anthropogenic inclusions were noted within the filling encountered in the bores.

6. Site Condition

A site inspection was undertaken on the 23 September 2015 by a senior engineer from DP. The approximate location of the photos shown in Figures 2 to 8 below are shown on Drawing 1, with the relevant figure numbers as outlined in this report noted on the drawing.

The main features and observations made of the site during the inspection are as follows:

- The proposed development is located within the western approximately two-thirds of the site, which is covered by the existing school facilities (school grounds);
- The remaining eastern area of the site (roughly one-third) is covered with trees and development of this area is not currently proposed;
- The buildings within the school are generally single and double storey and a combination of masonry structures and demountables (refer Figures 2 and 3);



Figure 2: View of existing building, looking south-west



Figure 3: Existing buildings in south-eastern area of school grounds

- Numerous concrete paved areas are located within the school ground (refer Figures 4 and 5);



Figure 4: Concrete access pavement and footpath, looking north-east



Figure 5: Footpath running to the north near administration building

- Several near level grassed areas are present within the school grounds, including an area of approximately 1,000 m² to the west of the multi-purpose hall (refer Figure 6);



Figure 6: View looking along northern edge of near level grassed area

- This area seems to have been created by cut and fill operations. The depth of filling is not known, however, 0.7 m depth of filling was encountered on the batter during investigations for the concurrent geotechnical investigation;
- A smaller areas of possible filling was present to the west of the existing administration building (refer Figure 7);



Figure 7: Possible mound of surficial filling in south-western area of site

- A detention pond was located in the north-eastern corner of the school grounds and was approximately 15 m in diameter and about 1.5 m deep. Some filling appears to have been placed during the construction of this pond (refer Figure 8);



Figure 8: Detention pond in north-east corner of school grounds

7. Potential Contamination

On the basis of the desktop review, available site history information and observations made during the site inspection, the sources of potential contamination for the site appear to be limited to the following:

- Importation of filling to the site, or excavation and placement of material won from site to form the level areas and the detention pond embankments. Fill materials which may have been imported to site may contain a range of contaminants included TRH, BTEX, PAH, OCP, OPP, PCB and asbestos depending on the source; and
- Possible application of herbicides and pesticides during weed control around the school grounds. Potential contaminants would include TRH, PAH, BTEX, PCB, OCP, OPP, Metals and Herbicides.

8. Preliminary Conceptual Site Model

A preliminary Conceptual Site Model (CSM) has been prepared for the investigation area with reference to the National Environment Protection (Assessment of Site Contamination) Measure 1999 amended 2013 (NEPC 2013) Schedule B2 (Ref 1). The CSM identifies potential contaminant sources and contaminants of concern, contaminant release mechanisms, exposure pathways and potential receptors. It should be noted that this preliminary conceptual site model will need to be revised following subsurface investigation. The preliminary CSM is presented in Table 3 below.

Table 3: Preliminary Conceptual Site Model

Known and Potential Primary Sources	Potential For Contamination and Area Affected	Primary Release Mechanism	Secondary Release Mechanism	Potential Impacted Media	Contaminants of Concern	Exposure Pathway	Potential Receptors	
							Current	Future
Importation of filling for construction of level areas and pond embankment	Low	Placement of filling on site	Long-term leaching of contaminants via runoff, rain water infiltration / percolation	Soil, groundwater, surface water	TRH, PAH, BTEX, PCB, OCP, OPP, Metals, Asbestos	Dermal contact, inhalation (dust), ingestion	Site workers, consultants, trespassers, vegetation, surface water, drainage channel to east of site	Earthworks employees, remediation contractors, school staff and students, vegetation, trespasser
Pesticides used during weed control	Low	Spills and leaks from use or storage	Long-term leaching of contaminants via runoff, rain water infiltration / percolation	Soil, groundwater, surface water	Pesticides, metals, TRH, Grease / Oil			

Notes to Table 3:

Heavy metals = Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc

TPH = Total Petroleum Hydrocarbons, BTEX = Benzene, Toluene, Ethyl Benzene and Xylene

PAH = Polyaromatic Hydrocarbons, PCB = Polychlorinated Biphenyls

OCP = Organochlorine Pesticides, OPP = Organophosphorus Pesticides

9. Conclusions

The results of the preliminary site assessment (contamination) for the proposed upgrading of facilities at the site indicate the following:

- Filling appears to have been placed within the school grounds during formation of the near level areas and detention pond embankments, which may contain potential contamination such as asbestos containing material, metals, hydrocarbons and pesticides;
- Localised filling in mounds, such as present within the south-western area of the school grounds, which may contain potential contamination such as asbestos containing material, metals, hydrocarbons and pesticides; and
- The possible use of pesticides and herbicides for control of weeds.

Although there were no visual or olfactory signs of gross contamination (i.e. no obvious staining or odour) observed on site or within the test bores undertaken for the concurrent geotechnical investigation, the presence of fill materials indicated that contamination may be present at the site. The presence or absence of contamination can only be confirmed by further investigation including environmental sampling and chemical testing.

However, the potential areas of environmental concern were generally localised and associated with near surface impacts, which would be readily addressed through appropriate investigation, and remediation (where required). It is noted that intrusive sampling and testing was not conducted for this PSA.

It is considered that the areas of potential contamination identified, once assessed and remediated, if necessary, will be suitable for the proposed land use.

10. References

1. National Environmental Protection Council (NEPC), "National Environmental Protection (Assessment of Site Contamination) Measures", 1999 (amended 2013).
2. Douglas Partners Pty Ltd, "Report on Geotechnical Investigation, Proposed Administration Building – Stage 1, Medowie Christian School, Waropara Road, Medowie", Project 81808, dated October 2015.
3. NSW Department of Environment and Planning, State Environment Planning Policy No 55 – Remediation of Land, under the Environmental Planning and Assessment Act 1979, amended 2014.

11. Limitations

Douglas Partners (DP) has prepared this report for this project at Medowie Christian School, Waropara Road, Medowie with reference to DP's proposal NCL150561/2 dated 18 September 2015. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of Medowie Christian School Ltd and EPM Projects 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. 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 conditions observed 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 inspection 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.

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.

Douglas Partners Pty Ltd

Appendix A

About this Report
Borehole Logs – Concurrent Geotechnical Investigation

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

This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Conditions of Engagement for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

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.

BOREHOLE LOG

CLIENT: EPM Projects Pty Ltd
PROJECT: Medowie Christian School
LOCATION: Waropara Road, Medowie

SURFACE LEVEL: --
EASTING: 392444
NORTHING: 6377648
DIP/AZIMUTH: 90°/--

BORE No: 1
PROJECT No: 81808.00
DATE: 23/9/2015
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)
				Type	Depth	Sample	Results & Comments		
	0.2	FILLING - Generally comprising of grey brown clayey, fine to medium grained sand filling, with trace of rootlets, moist to wet		D	0.4				
				U	0.5				
		CLAY - Very stiff, grey brown clay, slightly sandy, with fine grained sand, M>Wp			0.8	50	pp = 400		
					1.0				
	1			S	1.45		3,4,4 N = 8		
		From 1.70m, grey, with trace sand and some silt			1.9		pp = 400		
	2				2.5				
				S	2.7		pp = 350-400 3,7,5 N = 12		
					2.95				
	3								
	4	From 4.0m, stiff			4.0				
				S	4.3		2,4,5 N = 9 pp = 180-200		
					4.45				
	5								
					5.5		2,3,4 N = 7 pp = 150		
	5.95	Bore discontinued at 5.95m, limit of investigation		S	5.8				
					5.95				
	6								
	7								
	8								
	9								

RIG: 4WD mounted FG102

DRILLER: FICO (S.C)

LOGGED: West

CASING: Uncased

TYPE OF BORING: Solid flight auger

WATER OBSERVATIONS: No free ground water whilst augering

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: EPM Projects Pty Ltd
PROJECT: Medowie Christian School
LOCATION: Waropara Road, Medowie

SURFACE LEVEL: --
EASTING: 392435
NORTHING: 6377634
DIP/AZIMUTH: 90°/--

BORE No: 2
PROJECT No: 81808.00
DATE: 23/9/2015
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)
				Type	Depth	Sample	Results & Comments		
	0.06	FILLING - Generally comprising of brown wood chip mulch, with some silt and some sand, moist		D	0.2				
	0.4	At 0.06m, geofabric		D	0.5				
		CLAY - Firm, grey mottled brown clay, slightly silty, with trace fine to coarse grained sand, M>Wp		U ₅₀	0.8		pp = 350-400		
	1	CLAY - Very stiff, yellow brown clay, with trace silt, M>Wp			1.0				
				S	1.2		2,4,4 N = 8		
					1.65				
	2	From 2.0m, pale grey brown			2.5		pp = 350-400 3,5,7 N = 12		
				S	2.95				
	3				4.0		4,6,12 N = 18		
	4	From 4.0m, with trace ironstained gravel up to 40mm in size		S	4.3		pp = 300-350		
					4.45				
	5				5.5				
				S	5.7		pp = 350-400 3,8,10 N = 18		
	6				5.95				
	7	From 7.0m, grey			7.0		1,7,15 N = 22		
				S	7.3		pp = 550		
					7.45				
	8				8.5		4,14,20 N = 34		
				S					
	9	8.95	Bore discontinued at 8.95m, limit of investigation		8.95				

RIG: 4WD mounted FG102

DRILLER: FICO (S.C)

LOGGED: West

CASING: Uncased

TYPE OF BORING: Hand auger to 0.2m then solid flight augering

WATER OBSERVATIONS: No free ground water whilst augering

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

BOREHOLE LOG

CLIENT: EPM Projects Pty Ltd
PROJECT: Medowie Christian School
LOCATION: Waropara Road, Medowie

SURFACE LEVEL: --
EASTING: 392504
NORTHING: 6377687
DIP/AZIMUTH: 90°/--

BORE No: 5
PROJECT No: 81808.00
DATE: 23/9/2015
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)
				Type	Depth	Sample	Results & Comments		
	0.05	FILLING - Generally comprising grey brown, fine to medium grained sandy clay filling, with abundant rootlets, M>Wp		B	0.3				
	0.7	FILLING - Generally comprising of grey brown silty clay filling, with trace to some fine grained sand, roots, rootlets, timber and subrounded to subangular gravel up to 10mm in size, M>Wp		B	0.5				
	1.0	SILTY SAND / SANDY SILT - Medium dense, grey, fine grained sandy silt / silty sand, moist		D	0.9				
	1.1			B	1.1				
	1.3			B	1.3				
	1.5	CLAY - (Firm to stiff), grey brown silty clay, with some fine grained sand and trace roots and rootlets, M>Wp Bore discontinued at 1.5m, limit of investigation							
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	9								

RIG: 4WD mounted FG102

DRILLER: FICO (S.C)

LOGGED: West

CASING: Uncased

TYPE OF BORING: 300m solid flight auger

WATER OBSERVATIONS: No free ground water whilst augering

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

Appendix B

Historical Title Deed Search

Legal Liaison Searching Services

ABN: 52 832 569 710
Ph: 02 9233 5800
Fax: 02 9231 6151

Level 4, 70 Castlereagh Street
Sydney 2000
PO 2513 Sydney 2001
DX 1019 Sydney

Summary of Owners Report

LPI

Sydney

Address: - 6A Waropara Road, Medowie

Description: - Lot 22 D.P. 1036306

<u>Date of Acquisition and Term held</u>	<u>Registered Proprietor(s) & occupations where available</u>	<u>Reference to title at acquisition and sale</u>
24.01.1914 (1914 to 1935)	Closer Settlement Lands	Vol 2440 Fol 210
18.01.1935 (1935 to 1966)	Joseph Michael Aloysius Feenan (Labourer) Daisy Georgina Feenan (Married Woman)	Vol 2440 Fol 210 Now Vol 4672 Fol 77
02.02.1966 (1966 to 1972)	James Henry Wilkinson (Storeman & Packer)	Vol 4672 Fol 77
27.03.1972 (1972 to 1980)	Anthony George Pty Limited	Vol 4672 Fol 77
13.10.1980 (1980 to 2002)	Council of the Shire of Port Stephens	Vol 4672 Fol 77 Now 22/1036306
28.03.2002 (2002 to date)	# Medowie Christian School Limited	22/1036306

Denotes current registered proprietor

Easements: -

- 17.05.2011 Restrictions on the use of land (AG 238964) – fencing, posts, swimming pool, detention basin or pond, clearing of trees

Leases : - NIL

Yours Sincerely
Mark Groll
6 October 2015
(Ph: 0412 199 304)

Cadastral Records Enquiry Report

Ref : surv:scim-grollm

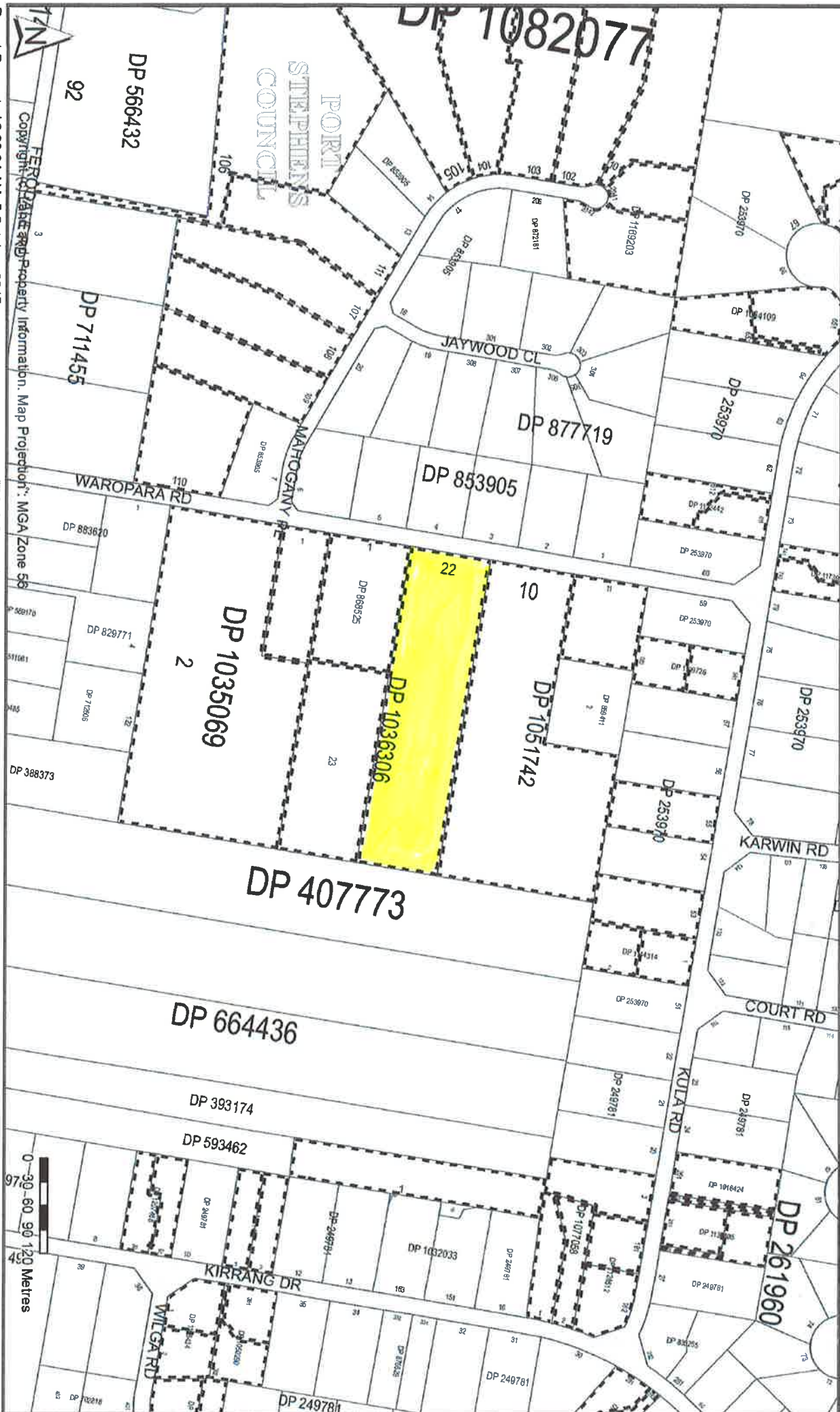
Requested Parcel : Lot 22 DP 1036306

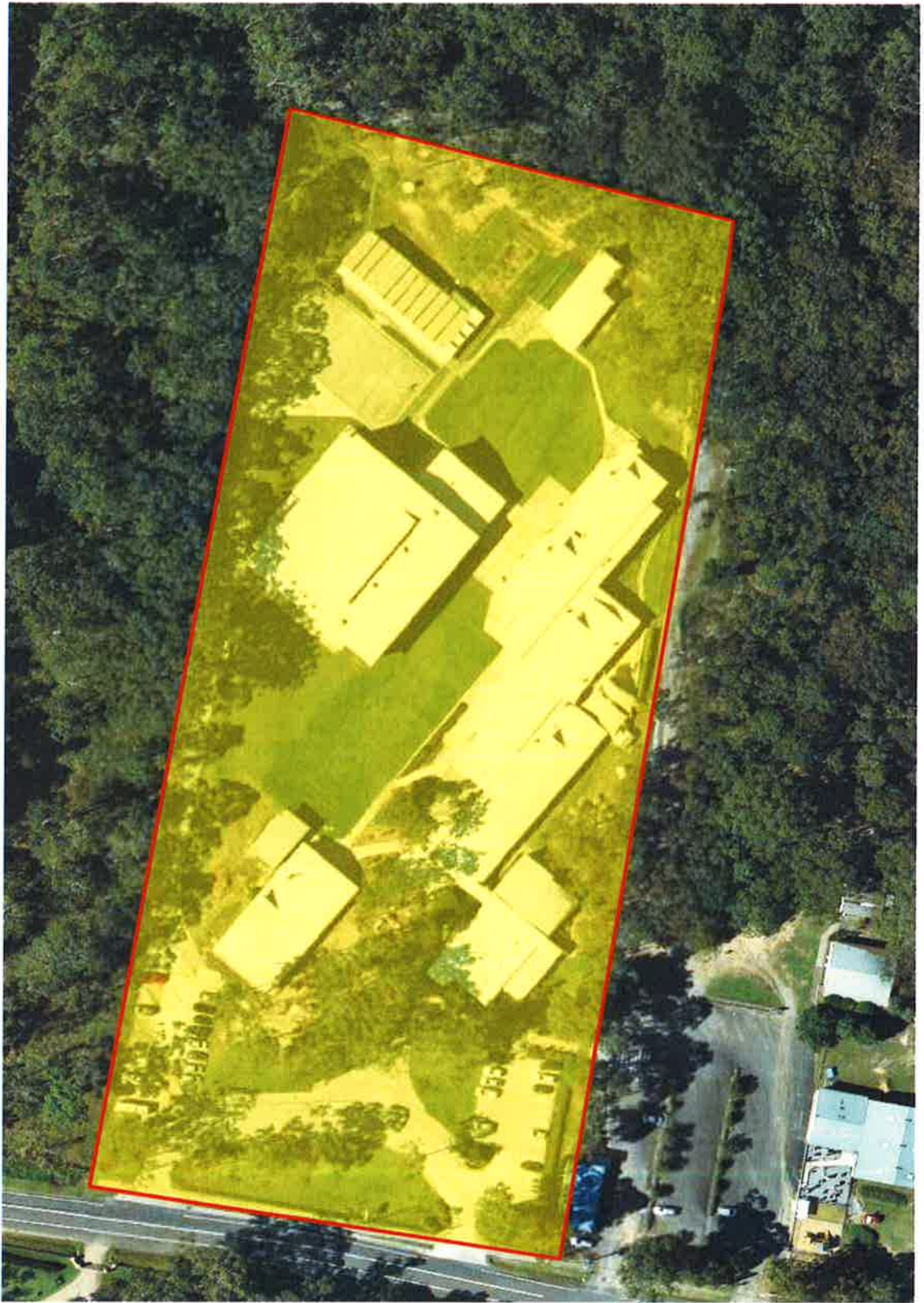
Identified Parcel : Lot 22 DP 1036306

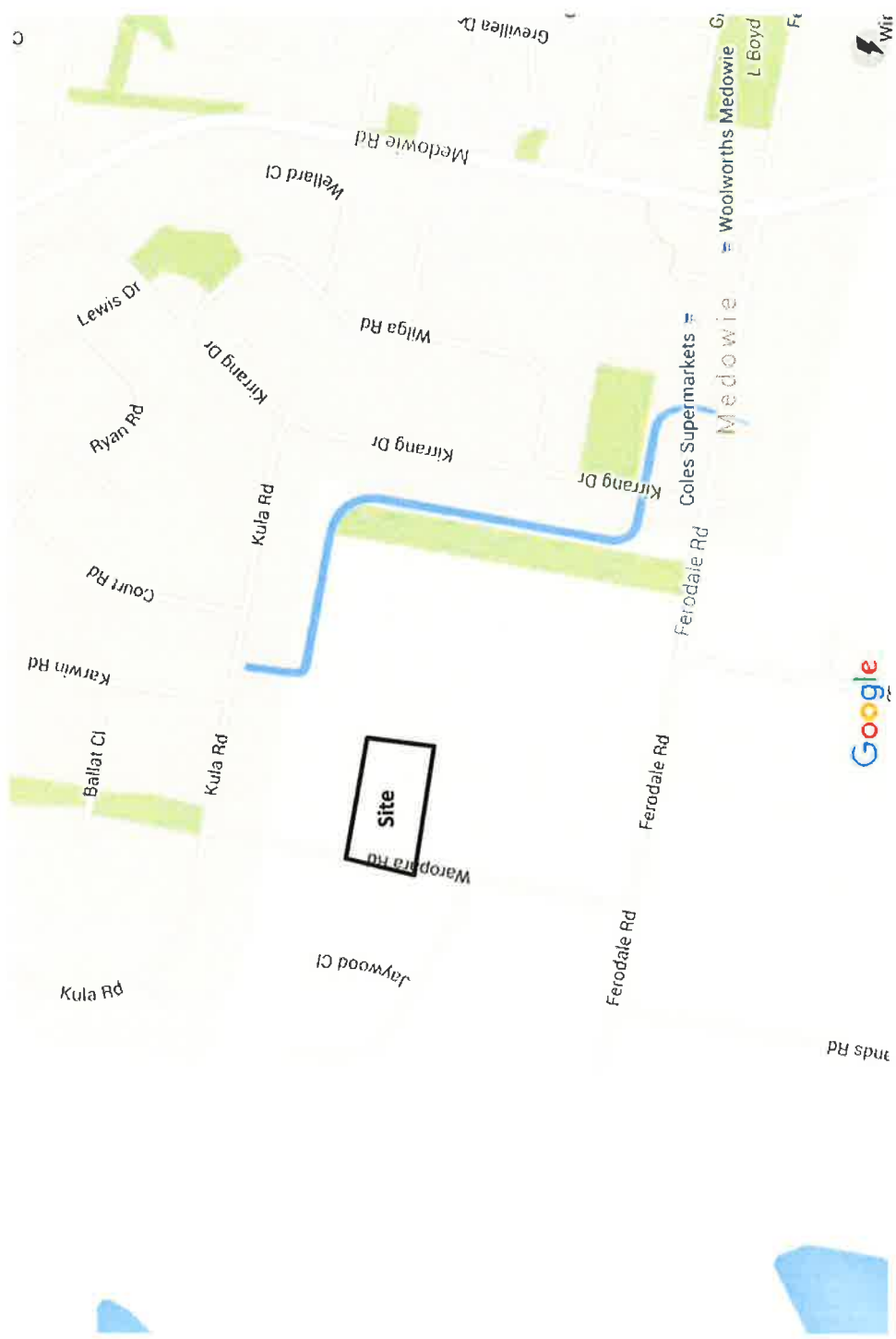
LGA: PORT STEPHENS

Parish : SUTTON

County : GLOUCESTER







SIGNATURE AND SEALS ONLY

THE COMMON SEAL OF PORT STEPHENS COUNCIL WAS HEREBY AFFIXED PURSUANT TO A RESOLUTION OF COUNCIL DATED 18 JANUARY 2000



THE COMMON SEAL OF PORT STEPHENS COUNCIL WAS HEREBY AFFIXED PURSUANT TO A RESOLUTION OF COUNCIL DATED 18 JANUARY 2000



THE COMMON SEAL OF PORT STEPHENS COUNCIL WAS HEREBY AFFIXED PURSUANT TO A RESOLUTION OF COUNCIL DATED 18 JANUARY 2000

Crown Lands Office Approval

Authorised Officer

Land District

Plan No.

Field Book

Subdivision Certificate

I certify that the provisions of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed

Subdivision

I insert subdivision of the land

Authorised Person/Consent/Approval/Consent

Consent Authority: Port Stephens Council

Date of endorsement: 12.11.2001

Accreditation no: 2001/145

Subdivision Certificate no: 2001/145

Plan no: 16-2000-521-1

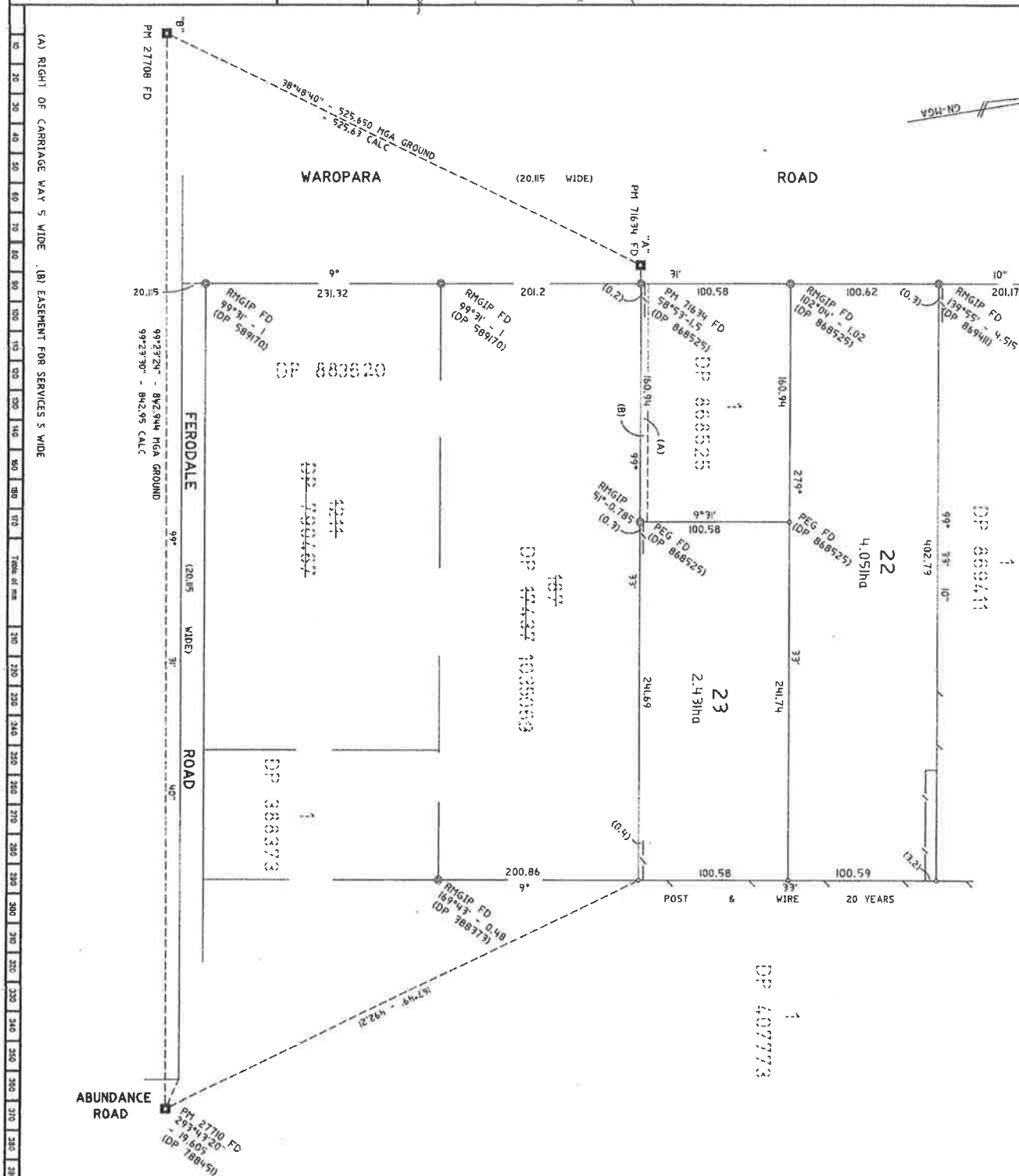
Make

of the plan is in the Surveyor's possession and the Land Titles Office will not issue a certificate of title until the plan is approved by the Registrar - General.

SURVEY PRACTICE REGULATIONS 1996, CLAUSE 32(2)				
MGA CO-ORDINATES				
MARK	EASTING	NORTHING	ZONE	CLASS/ORDER
PM 27708	392 938.503	6377 073.444	56	B/U
PM 27710	392 870.007	6376 965.649	56	B/U
PM 71634	392 302.951	6377 922.634	56	B/U

SOURCE: MGA CO-ORDS. ADOPTED FROM DEPT OF L.I.C. 20/9/2000

COMBINED SEA LEVEL & SCALE FACTOR 0.999710



DP1036306

Registered 5.12.2001

The System: TORRENS

Purpose: SUBDIVISION

Ref. Map: PARISH

Last Plan: DP868525, DP114371

PLAN OF SUBDIVISION OF LOT 2 IN DP868525 AND RIGHT OF CARRIAGE WAY THROUGH LOT 1 DP 868525

Lengths are in metres. Reduction Ratio 1:2000

LGA: PORT STEPHENS

Locality: MEDOWIE

Parish: SUTTON

County: GLOUCESTER

This is sheet 1 of my plan.

Surveyors (Practical) Registration 1996

BRIAN J. HOTT

FO BOX 54 RAYMOND TERRACE RAYMOND NSW 2267

a survey conducted in accordance with the provisions of the Survey Act 1981 and the Survey Regulations 1986 and was completed on 20/7/2000

The survey relates to: LOTS 2 & 23

Plans used in preparation of survey / completion

DP 868525 DP 868520 DP 58710

DP 868525 DP 778537 DP 750457

DP 407773 DP 778459

DP 829771 DP 253970

DP 388373 DP 725045

PANEL FOR USE ONLY for statements of intention to dedicate public roads, to create public reserves, or to create public easements, or to create public use of land or positive covenants.

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT 1986-1988 AND THE CONVEYANCING ACT 1988-1989 IT IS INTENDED TO CREATE:

1. RIGHT OF CARRIAGE WAY 5 WIDE

2. EASEMENT FOR SERVICES 5 WIDE



Legal Liaison Services hereby certifies that the information contained in this document has been provided electronically by the Registrar General.

Information provided through Tri-Search an approved LPI/NSW Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

5/10/2015 8:32AM

FOLIO: 188/17437

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 4672 FOL 77

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
22/5/1997	DP868525	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

medowie

PRINTED ON 5/10/2015

*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

5/10/2015 8:31AM

FOLIO: 2/868525

First Title(s): VOL 751 FOL 187

Prior Title(s): 188/17437

Recorded	Number	Type of Instrument	C.T. Issue
22/5/1997	DP868525	DEPOSITED PLAN	FOLIO CREATED EDITION 1
5/12/2001	DP1036306	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

medowie

PRINTED ON 5/10/2015

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LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

5/10/2015 8:31AM

FOLIO: 22/1036306

First Title(s): VOL 751 FOL 187

Prior Title(s): 2/868525

Recorded	Number	Type of Instrument	C.T. Issue
5/12/2001	DP1036306	DEPOSITED PLAN	FOLIO CREATED EDITION 1
28/3/2002	8468322	TRANSFER	EDITION 2
2/7/2004	AA766598	MORTGAGE	EDITION 3
13/7/2005	AB619102	MORTGAGE	EDITION 4
17/5/2011	AG238964	RESTRICTION ON USE OF LAND BY/VESTED IN PRESCRIBED AUTHORITY	EDITION 5

*** END OF SEARCH ***

medowie

PRINTED ON 5/10/2015

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Form: 13RPA
Licence: 01-05-079
Licensee: LEAP Legal Software Pty
Limited
Firm name: McPhee Kelshaw

**RESTRICTION ON THE
USE OF LAND BY A
PRESCRIBED AUTHORITY**



AG238964D

New South Wales

Section 88E(3) Conveyancing Act 1919

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.

(A) TORRENS TITLE	Folio Identifier 22/1036306		
(B) LODGED BY	Delivery Box 302C	Name, Address or DX and Telephone LPN: 123824 M Reference: MCPHEE: MEDOWIE SCHOOL: 135381	BOX 302G LegalStream Tel: 9231 0122 Fax: 9233 6411 CODE R
(C) REGISTERED PROPRIETOR	Of the above land MEDOWIE CHRISTIAN SCHOOL LIMITED ACN 085 148 965		
(D) LESSEE MORTGAGEE or CHARGE	Of the above land agreeing to be bound by this restriction		
	Nature of Interest	Number of Instrument	Name
	Mortgage	AA766598 and AB619102	Baptist Financial Services Australia Limited (formerly Baptist Investments and Finance Ltd)
(E) PRESCRIBED AUTHORITY	Within the meaning of section 88E(1) of the Conveyancing Act 1919 PORT STEPHENS COUNCIL		

(F) The prescribed authority having imposed on the above land a restriction in the terms set out in annexure 'A' hereto applies to have it recorded in the Register and certifies this application correct for the purposes of the Real Property Act 1900.

DATE

(G) **Execution by the prescribed authority**

I certify that an authorised officer of the prescribed authority who is personally known to me or as to whose identity I am otherwise satisfied signed this application in my presence.

Signature of witness:

Name of witness:

Address of witness:

JANICE IRWIN

46 DUCKENFIELD WHARF RD
DUCKENFIELD.

Signature of authorised officer:

Name of authorised officer:

Position of authorised officer:

AMANDA GALE

DEVELOPMENT CO-ORDINATOR

(G) **Execution by Registered Proprietor**

Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the corporation named below by the authorised person(s) whose signature(s) appears(s) below

Corporation: Medowie Christian School Limited

Authority: section 127 of the Corporations Act 2001

Signature of authorised person:

Name of authorised person:

Office held:

Sam Hays
Director

Signature of authorised person:

Name of authorised person:

Office held:

Stuart Gray
Director/Secretary

(H) **Consent of the mortgagee**

The mortgagee under mortgage No. AA766598 and AB6519102

I certify that the above mortgagee who is personally known to me or as to whose identity I am otherwise satisfied, signed this application in my presence.

Signature of witness:

Name of witness:

Address of witness:

PETER MARK HORBURY

Signature of mortgagee:

DARRYL GEORGE COLLINS

Annexure 'A' to Restriction on the use of Land by a Prescribed Authority

PARTIES:

Medowie Christian School Limited ACN 085 148 965 - Registered Proprietor
Port Stephens Council - Prescribed Authority

(A) Folio Identifier 22/1036306

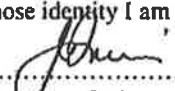
(F) TERMS OF RESTRICTIONS ON THE USE OF LAND

1. No fencing shall be erected on any lot burdened unless
 - (i) it is constructed to incorporate a gap of 200 mm between the bottom of the fence and the ground at a point along the fence; or
 - (ii) sawn posts are provided on either side of the fence at not less than 10 metre intervals at the same or greater height than the fence.
2. No swimming pool, detention basin or garden pond shall be erected on the lot burdened unless a rope of at least 50 mm diameter is affixed and left dangling at least 1m into the swimming pool, detention basin or garden pond to permit the escape of koalas.
3. Except for clearing for fire management purposes no clearing of trees will be permitted outside the identified building envelope(s) without development consent from Port Stephens Council.
4. Port Stephens Council is empowered to release, vary and/or modify the restriction.

Date:

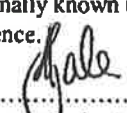
(G) Execution by the prescribed authority

I certify that an authorised officer of the prescribed authority who is personally known to me or as to whose identity I am otherwise satisfied signed this application in my presence.


.....
Signature of witness

JANICE IRWIN
.....
Name of Witness

46 DUCKENFIELD WHARF RD
DUCKENFIELD
.....
Address of Witness


.....
Signature of authorised officer
AMANDA GALE
.....
Name of authorised officer

DEVELOPMENT CO-ORDINATOR.
.....
Position of authorised officer

(G) Execution by the Registered Proprietor

Certified correct for the purposes of the Real Property Act 1900
and executed on behalf of the corporation named below by the
authorised person(s) whose signature(s) appear(s) below:

Corporation: Medowie Christian School Limited
Authority: section 127 of the Corporations Act 2001

Signature of authorised person

SAMUEL HAYS
Name of authorised person

Office held: Director

Signature of authorised person

STUART GRAY
Name of authorised person

Office held: Director/Secretary

(H) Consent of the mortgagee

Certified correct for the purposes of the Real Property Act 1900
and executed on behalf of the corporation named below by the
authorised person(s) whose signature(s) appears(s) below
pursuant to the authority specified.

Corporation: Baptist Financial Services Australia Limited
Authority: section 127 of the Corporations Act 2001

Signature of authorised person:

PETER MARK
HOBBS
Name of authorised person:
Office held: Director

Signature of authorised person:

DR ANNE COLLINS
Name of authorised person:
Office held: Director



Legal Liaison Services hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act.

Information provided through Tri-Search an approved LPLNSW Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 22/1036306

SEARCH DATE	TIME	EDITION NO	DATE
5/10/2015	8:30 AM	5	17/5/2011

LAND

LOT 22 IN DEPOSITED PLAN 1036306
AT MEDOWIE
LOCAL GOVERNMENT AREA PORT STEPHENS
PARISH OF SUTTON COUNTY OF GLOUCESTER
TITLE DIAGRAM DP1036306

FIRST SCHEDULE

MEDOWIE CHRISTIAN SCHOOL LIMITED (T 8468322)

SECOND SCHEDULE (4 NOTIFICATIONS)

- 1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
- 2 AA766598 MORTGAGE TO BAPTIST INVESTMENTS & FINANCE LTD
- 3 AB619102 MORTGAGE TO BAPTIST INVESTMENTS & FINANCE LTD
- 4 AG238964 RESTRICTION(S) ON THE USE OF LAND

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

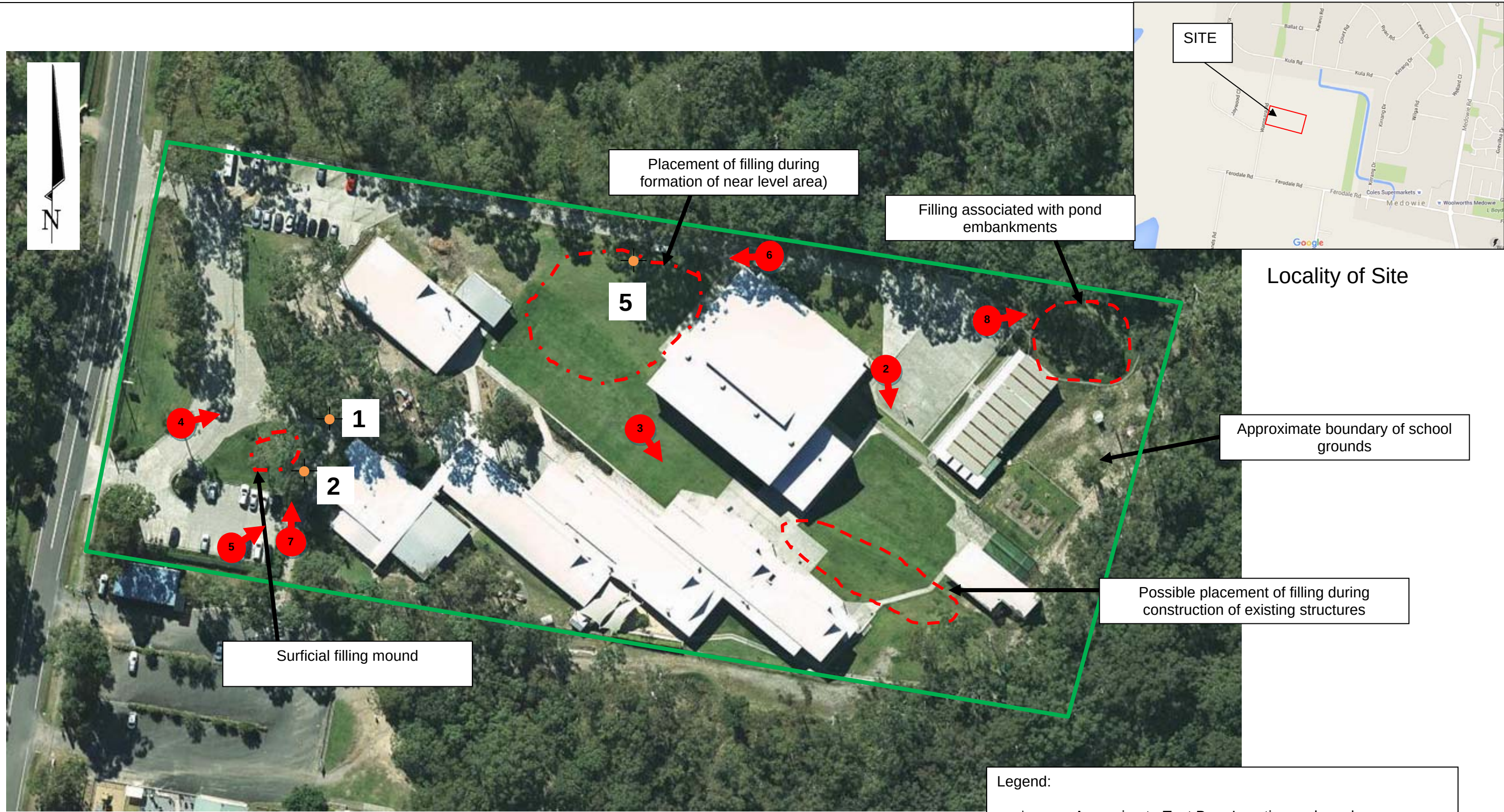
medowie

PRINTED ON 5/10/2015

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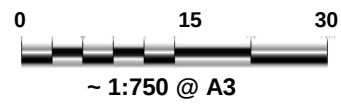
Appendix C

Drawing 1 – Identified Areas of Environmental Concern



Notes:

1. Drawing adapted from aerial image obtained from Spatial Information Exchange



Legend:

- Approximate Test Bore Location and number (concurrent geotechnical investigation)
- Photo location, direction and figure number in report

 Douglas Partners <i>Geotechnics Environment Groundwater</i>	CLIENT: Medowie Christian School Ltd		TITLE: Test Location Plan Identified Areas of Environmental Concern Medowie Christian School, Waropara Road, Medowie	PROJECT No: 81808.00	
	OFFICE: Newcastle	DRAWN BY: MPG		DRAWING No: 1	
	SCALE: 1:750@A3	DATE: 20.10.2015		REVISION: 0	