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Penrith Lakes Development Corporation
PO BOX 457
Cranebrook, NSW, 2749

21 October 2013

Attention: Robert Golaszewski

Dear Sir

**RE: LANDFORM APPRAISAL - THE ESCARPMENT LAND PARCEL,
PENRITH LAKES SCHEME**

1 INTRODUCTION

Coffey understands that Penrith Lakes Development Corporation Ltd (PLDC) may offer for sale a parcel of land known as "The Escarpment". The Escarpment land parcel is shown on Drawing PLDC – 11537 Rev B attached.

The Escarpment land parcel is located north-east of Castlereagh Road and occupies an area of about 24.3 hectares. It will comprise 9 lots derived from the subdivision of Lots 109 and 110 in DP114393.

Castlereagh Road forms the south west boundary of the land parcel and Church Lane forms most of the north east boundary of the land parcel. The land includes a long narrow pond adjacent to Castlereagh Road, and hill slopes and plateau towards Church Lane.

The Penrith Lakes site is located to the west of Castlereagh Road over former quarries that have been filled and remediated. The Escarpment land parcel is located at the edge of the former quarried lands.

This report presents a summary of landform information available to Coffey regarding The Escarpment land parcel for the purpose of informing potential purchasers.

2 METHODOLOGY

Coffey's appraisal has been based on review of historical quarry information, geology maps, supplied aerial photographs, and site observations by a geotechnical engineer.

3 TERRAIN

Castlereagh Road at the location of the Escarpment land parcel is located at the edge of the Nepean River floodplain and is positioned on an embankment at about RL 24m AHD. To the north east of Castlereagh Road is an artificial pond and wetland created when the former quarry excavation was filled.

To the north east of the pond/wetland, the ground rises at average gradient of about 25% to 30% (but with locally steeper slopes) to a ridge at RL 46m AHD (see Photograph 1), then grades gently down to Church Lane. Drawing PLDC – 11537 (Rev B) shows the site contours.

Photograph 1 – The pond and hill slopes north east of Castlereagh Road (looking north)



4 GEOLOGICAL SETTING

The Penrith Lakes site is located within Quaternary Age alluvial soils the Cranebrook Formation. Typically the natural soil profile comprised “overburden” comprising sand, silt and clay soils overlying sandy gravel. Large areas of the Penrith Lakes site have been excavated, quarried to remove the sandy gravel resource, and backfilled with the excavated overburden.

To the north east of Castlereagh Road in the vicinity of the Escarpment land parcel is a ridge of Ashfield Shale, which forms the higher elevation land (slopes and plateau adjacent to Church Lane).

The Escarpment land parcel is located along the north-east perimeter of the quarried lands and is partially underlain by former quarried/back-filled land. Drawing PLDC – 11537 (Rev B) shows the location of the former quarry high face as determined by PLDC survey. The land to the north-east of the former quarry high face is interpreted to be natural ground. The land to the south-west of the former quarry high face is expected to be deep fill.

5 HISTORICAL QUARRY INFORMATION

PLDC gathered historical information to develop a Fill History for the eastern portion of the Penrith Lakes site. The quarried land within the Escarpment land parcel was part of Fill History Areas 38a, 38b and 41. It is reported that these areas were filled with stripped overburden using trucks and spreaders. The construction of this landform was not monitored by Coffey and we are unable to comment on the fill construction. The fill was placed in the low-lying areas west of the quarry high face marked on Drawing PLDC – 11537 Rev B.

6 HISTORICAL PHOTOGRAPHS

Coffey has been provided with a series of aerial photographs taken between April 1972 and September 2010. These photographs indicate that:

- Quarrying within the land parcel occurred between about 1996 and 1999;
- Backfilling of the quarried land was substantially completed by 2003;
- Castlereagh Road relocation was constructed in 2006 and substantially completed by early 2007.

7 CASTLEREAGH ROAD CONSTRUCTION

Coffey conducted a geotechnical investigation for Castlereagh Road relocation. The investigation indicated that the foundation for the road construction in the vicinity of the Escarpment Land Parcel comprised Uncontrolled Fill.

The embankment construction for the Castlereagh Road relocation broadly comprised excavation of the Uncontrolled Fill to RL 18.5m AHD and replacement with Engineered Fill.

8 GEOTECHNICAL COMMENTS

Proposed Lots 1 to 9 contain substantial areas that have not been affected by quarrying activities. Development of this portion of the lots would need to consider the landform characteristics and should be based on further geotechnical advice that is specific to the proposed development. In general:

- Significant geotechnical constraints are not expected on the plateau area (slopes about 5%) between the ridge and Church Lane. Each lot has some land within this terrain unit.
- Slope risks should be considered for proposed development on steeper slopes south of the ridge. All proposed lots are affected to varying extents by this constraint.

Those parts of proposed Lots 1 to 9 that are located within former quarried lands should not be developed without specific geotechnical engineering advice.

PLDC advises that the 1:100 year flood level in this locality is about RL 22m AHD, which mainly encompasses the former quarried land and the toe of the natural slopes.

9 LIMITATIONS

This report should be read in conjunction with the attached document "Important Information about your Coffey Report".

Coffey's commission did not extend to consideration of potential environmental or contamination issues in respect to the suitability of the land for any proposed use.

The Escarpment land parcel forms part of the surface water drainage system associated with Castlereagh Road. Coffey was not involved in the civil engineering design of the drainage works and is not aware of constraints on the landform with respect to drainage function.

For and on behalf of Coffey Geotechnics Pty Ltd



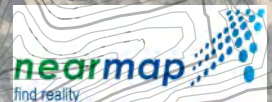
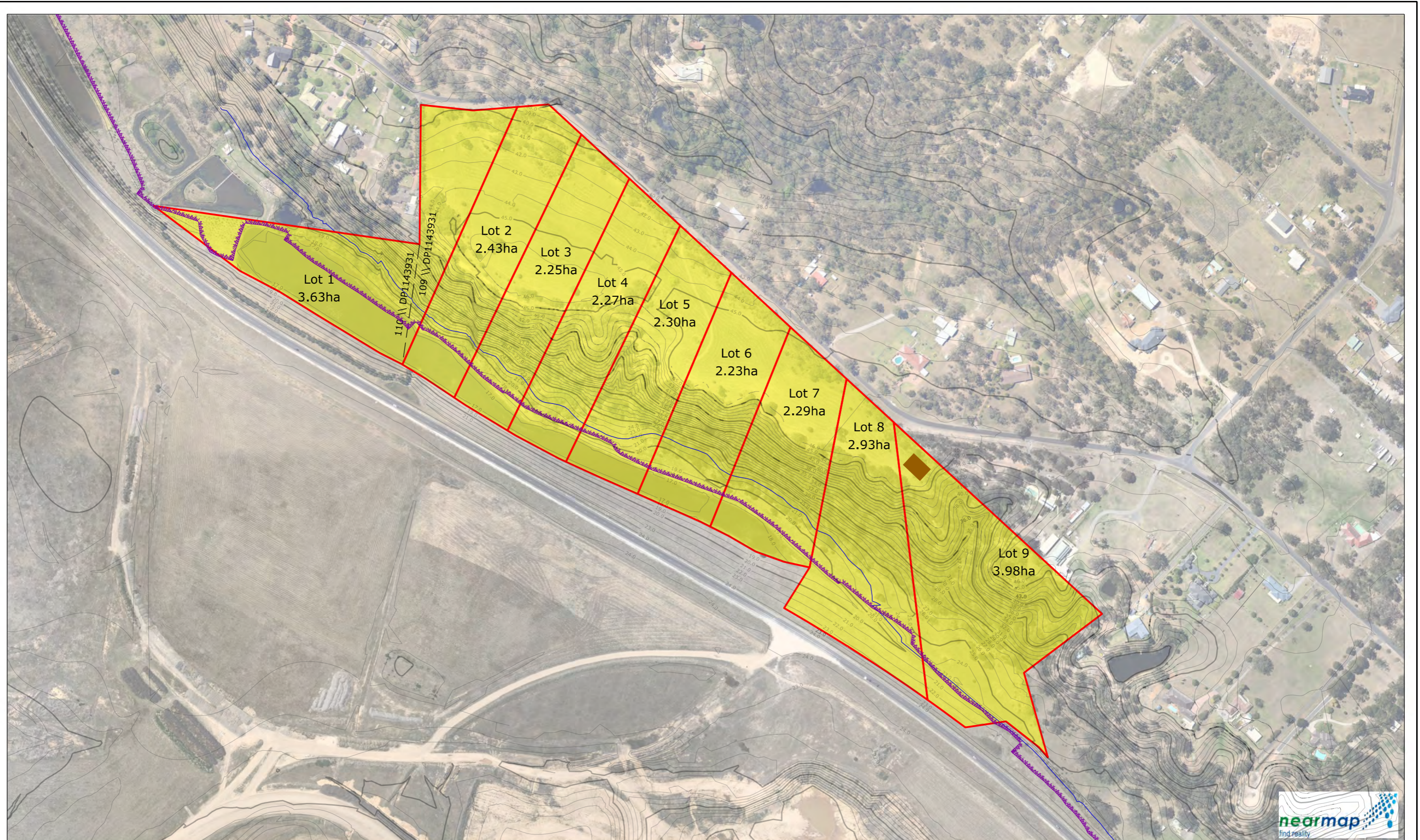
Robert Turner

Principal Geotechnical Engineer

Attachments

PLDC Drawing 11537 Rev B

Important Information about your Geotechnical Engineering Report



Rev	Date	Description	Drafted By	Designed By	Checked By	Approved By
B	09/04/2013	For Information - NOT FOR CONSTRUCTION	TPK	TPK		
A	04/02/2013	For Information - NOT FOR CONSTRUCTION	TPK	TPK		

Notes:
 109 \ DP1143931 covers Lots 1-9
 110 \ DP1143931 covers Lot 1
 Area of 9 Lot Subdivision 24.31ha

- Legend:
- RL 22.0 (100yr Flood Level)
 - - - - - Quarry High Face
 - Possible House Site location

Scale Bar:
 0 40 80 120 160 200
 Metres

Projection:
 MGA Zone 56

Sheet Size: ISO A3 Print Scale: 1:4000

Title:
**The Escarpment
 Lot Disposal Layout**

Drawing No:
PLDC - 11537

Revision:
B





Important information about your **Coffey** Report

As a client of Coffey you should know that site subsurface conditions cause more construction problems than any other factor. These notes have been prepared by Coffey to help you interpret and understand the limitations of your report.

Your report is based on project specific criteria

Your report has been developed on the basis of your unique project specific requirements as understood by Coffey and applies only to the site investigated. Project criteria typically include the general nature of the project; its size and configuration; the location of any structures on the site; other site improvements; the presence of underground utilities; and the additional risk imposed by scope-of-service limitations imposed by the client. Your report should not be used if there are any changes to the project without first asking Coffey to assess how factors that changed subsequent to the date of the report affect the report's recommendations. Coffey cannot accept responsibility for problems that may occur due to changed factors if they are not consulted.

Subsurface conditions can change

Subsurface conditions are created by natural processes and the activity of man. For example, water levels can vary with time, fill may be placed on a site and pollutants may migrate with time. Because a report is based on conditions which existed at the time of subsurface exploration, decisions should not be based on a report whose adequacy may have been affected by time. Consult Coffey to be advised how time may have impacted on the project.

Interpretation of factual data

Site assessment identifies actual subsurface conditions only at those points where samples are taken and when they are taken. Data derived from literature and external data source review, sampling and subsequent laboratory testing are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact on the proposed development and recommended actions. Actual conditions may differ from those inferred to exist, because no professional, no matter how qualified, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions. For this reason, owners should retain the services of Coffey through the development stage, to identify variances, conduct additional tests if required, and recommend solutions to problems encountered on site.

Your report will only give preliminary recommendations

Your report is based on the assumption that the site conditions as revealed through selective point sampling are indicative of actual conditions throughout an area. This assumption cannot be substantiated until project implementation has commenced and therefore your report recommendations can only be regarded as preliminary. Only Coffey, who prepared the report, is fully familiar with the background information needed to assess whether or not the report's recommendations are valid and whether or not changes should be considered as the project develops. If another party undertakes the implementation of the recommendations of this report there is a risk that the report will be misinterpreted and Coffey cannot be held responsible for such misinterpretation.

Your report is prepared for specific purposes and persons

To avoid misuse of the information contained in your report it is recommended that you confer with Coffey before passing your report on to another party who may not be familiar with the background and the purpose of the report. Your report should not be applied to any project other than that originally specified at the time the report was issued.

Interpretation by other design professionals

Costly problems can occur when other design professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, retain Coffey to work with other project design professionals who are affected by the report. Have Coffey explain the report implications to design professionals affected by them and then review plans and specifications produced to see how they incorporate the report findings.



Important information about your **Coffey Report**

Data should not be separated from the report*

The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, drawings, etc. are customarily included in our reports and are developed by scientists, engineers or geologists based on their interpretation of field logs (assembled by field personnel) and laboratory evaluation of field samples. These logs etc. should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

Geoenvironmental concerns are not at issue

Your report is not likely to relate any findings, conclusions, or recommendations about the potential for hazardous materials existing at the site unless specifically required to do so by the client. Specialist equipment, techniques, and personnel are used to perform a geoenvironmental assessment. Contamination can create major health, safety and environmental risks. If you have no information about the potential for your site to be contaminated or create an environmental hazard, you are advised to contact Coffey for information relating to geoenvironmental issues.

Rely on Coffey for additional assistance

Coffey is familiar with a variety of techniques and approaches that can be used to help reduce risks for all parties to a project, from design to construction. It is common that not all approaches will be necessarily dealt with in your site assessment report due to concepts proposed at that time. As the project progresses through design towards construction, speak with Coffey to develop alternative approaches to problems that may be of genuine benefit both in time and cost.

Responsibility

Reporting relies on interpretation of factual information based on judgement and opinion and has a level of uncertainty attached to it, which is far less exact than the design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. To help prevent this problem, a number of clauses have been developed for use in contracts, reports and other documents. Responsibility clauses do not transfer appropriate liabilities from Coffey to other parties but are included to identify where Coffey's responsibilities begin and end. Their use is intended to help all parties involved to recognise their individual responsibilities. Read all documents from Coffey closely and do not hesitate to ask any questions you may have.

* For further information on this aspect reference should be made to "Guidelines for the Provision of Geotechnical information in Construction Contracts" published by the Institution of Engineers Australia, National headquarters, Canberra, 1987.