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Integrated Practical Solutions

Pollution Incident Response Management Plan

Hyland Road Landfill
Hyland Road, Greystanes

Prepared for
Cumberland City Council

Project 84813.03
January 2021

Douglas Partners
Geotechnics / Environment / Groundwater

Document History

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Revision 0	1	-	Holroyd City Council (Stovan Franca)
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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		29 January 2021
Reviewer		29 January 2021

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Pollution Incident Response Management Plan
Hyland Road Landfill
Hyland Road, Greystanes

1. Introduction

This revised Pollution Incident Response Management Plan (PIRMP)[1] is for the site known as Hyland Road Landfill, Greystanes. Cumberland City Council is the site owner and currently holds environmental protection licence (EPL) number 4537 for the site. The development and implementation of a PIRMP plan is required for all sites that hold an EPL in accordance with the NSW Protection of the Environment Act (1997) (POEO).

The objectives of the plan are to:

- Assist with response actions to a pollution incident;
- Assist with timely communication about a pollution incident;
- Minimise and control the risk of a potential pollution incident; and
- Outline procedures to assist with the PIRMP's implementation.

The site's EPL allows for the application of waste materials generated through civil works conducted within the former Holroyd City Council area to land (known as the Hyland Road Landfill). It also allows for activities of sorting, temporary storage and recycling of used concrete, roadbase, asphalt and soil.

It is noted that at the time of drafting this plan (18 January 2016), the site was dormant, no longer taking materials or undertaking the aforesaid activities. Closure plans for the site are being developed with a view to surrendering the EPL in the future.

Drawing 1 in Appendix A shows the site's location.

This PIRMP should be read in conjunction with other management procedures and plans for the site and for Council's properties generally.

2. Site Information and Background on Potential Pollutant Sources

2.1 Site Description

The site is near-rectangular and covers an area of approximately 10.3 hectares with a 270 m long frontage to Hyland Road. A fence extends approximately north-south and divides the site into two approximate halves. The area to the east of the fence is predominantly grass-covered, with a gravel

[1] Revisions to the PIRMP included herein are limited to amendments of references to Council's name (i.e. from Holroyd City Council to Cumberland City Council) and Council's relevant personnel and contact information as requested by Council.

access road extending from Hyland Road to the south-eastern corner. Large trees, dense bush / scrub and Prospect Creek extend along the eastern boundary. The ground surface level dips gently down towards the south-east at about 1-2 m from approximately RL 40 m to RL 33 m relative to Australian Height Datum (AHD).

The area to the west of the fence is covered with long grass, patches of dense scrub and gravel access roads traversing around stockpiles of material about 2-3 m high. The ground surface level is "moon-scaped", with sudden changes in levels at the battered sides of stockpiles. A steep batter extends along the southern and western boundary. Large trees are scattered around the site and form rows along Hyland Road and the middle fence line. High voltage electrical cables and towers extend along the southern boundary.

Beyond the site boundaries, Hyland Road and vacant park land are located to the north, with Gipps Road and an industrial estate to the east, whilst the Liverpool to Parramatta Transit Way, an above ground Sydney Water pipelines and Gipps Road Sporting Complex lie to the south. Holroyd rifle range and Transgrid's electrical substation are located to the west.

2.2 Site Background - DP Investigation 2015

DP understands that the site operated as a non-putrescible landfill from the late 1960's to 1990's. Based on DP's investigations on the site in mid-2015 waste fill is present across the site[2]. The fill was observed to comprise gravelly silty clay, silty clay, sandy clay, gravelly clay, gravelly sand and gravel filling to depths of between 0.2 m and 8.1 m below ground level (bgl). The fill included rootlets, ironstone gravel, sandstone, shale, gravel, plastic, steel, glass, timber, brick, concrete, asphalt, ash, slag, tiles, aluminium, steel wire, textile and possible fragments of fibre cement.

The surface soil results from the preliminary investigation indicated that with the exception of two exceedances of the human health based investigation levels and several ecological screening level exceedances, that there was no evidence of extensive surface contamination.

Free groundwater was observed between RL 29.76 m AHO and 34.67 m AHO. Based on the measured groundwater levels the direction of groundwater flow within the site was inferred to be to the south-west, however, the regional groundwater flow is likely to be south-east with local variations due to perched water within the landfill mass. The results indicate that there is limited evidence of extensive on-site groundwater contamination, although ammonia is elevated as would be expected in a landfill. Similarly, there is no evidence of significant off-site migration of groundwater contamination. In this regard, it appears that the natural clays underlying the fill are acting as an aquitard thereby helping to prevent vertical and lateral migration of groundwater contamination from the former landfill into the surrounding environment. Therefore, based on the available information there is no need at this stage to actively control or manage leachate at the site.

Additionally, landfill gas, in particular methane and carbon dioxide were recorded at elevated concentrations within the subsurface profile across the site. Results indicated that gas mitigation measures are required for any proposed building development on (or possibly adjacent to) the site.

[2] Douglas Partners Pty Ltd, *'Report on Preliminary Site (Contamination) Investigation, Hylan Road Park, Hyland Road, Greystanes'*, DP Project 84813.01 dated July 2015.

3. Pollution Incident Response

Given that the site is no longer an active landfill, there are no plans to reengage in such activities, and the time that has elapsed since site activities were last undertaken, the potential sources capable of generating a pollution incident are considered to be limited. Therefore, in general the risks of a pollution incident are primarily related to the potential chemical and physical changes to the already emplaced fill / waste which will occur over time.

The risk of a pollution incident can be categorised into two general fields: Critical, which requires **immediate action and engagement of emergency services**; and Non-Critical, which requires action to be taken in timely matter but does not pose an immediate threat to the health and safety of people, property or the environment. Non-critical pollution incidents may take extended periods of time to be resolved.

Table 1 summarises the contact details for those responding parties outlined in Tables 2 and 3 which also outline some of the potential pollution incidents (Critical and Non-critical) which may occur. Note that additional responders may be required depending on the nature of the contamination incident (e.g. specialist contractors, consultants, etc.).

Table 1: Contact Details

Organisation	Contact Telephone Number
Emergency - Fire, Ambulance, Police	**000**
NSW Police - Holroyd Local Area Command	02 9897 4899
NSW Ambulance Service - Parramatta Ambulance Station	02 9891 9227
NSW Fire and Rescue - Smithfield Fire Station	02 9609 2343
NSW Health (Hospital) - Westmead Hospital	02 9845 5555
Cumberland City Council - Executive Manager - Recreation and Facilities	02 8757 9569
NSW EPA	131 555
NSW Ministry of Health	02 9391 9000
SafeWork NSW	131 050

Table 2: Critical Pollution Incident

Incident	Potential Risk	Likely Responders	Initial Actions
Fire (potential to be surface or subsurface).	Human life and property damage, reduced air quality, impact on the environment.	NSW fire and Rescue, NSW Police, NSW Ambulance (as required), Cumberland City Council, NSW EPA.	Evacuate site. Call emergency services immediately on 000. *Note: Evacuation of neighbouring properties may be required.*
Migration of landfill gas onto adjacent properties.	Explosion or asphyxiation due to build of gases in confined spaces.	NSW Fire and Rescue, NSW EPA, Cumberland City Council, NSW Ministry of Health (as required).	Engage with NSW Fire and Rescue and NSW EPA. Undertake landfill gas monitoring within structures, across the surface of the site and neighbouring properties. *Note: Evacuation of neighbouring properties may be required.*

Note: 1. No buildings located on the site at the time of drafting the PIRMP (18 January 2016).

Table 3: Non-Critical Pollution Incident

Incident	Potential Risk	Likely Responders	Initial Actions
Airborne dust generated from soils/stockpiled materials on-site.	Reduced air quality for site and neighbouring properties.	Cumberland City Council, NSW EPA.	Minimise exposure of soils. Wet-down and cover exposed soils generating the dust.
Migration of contaminants from soil via groundwater migration off-site.	Contamination of groundwater and receiving water bodies. Exposure of neighbouring sites to vapours from contaminated groundwater.	Cumberland City Council, NSW EPA, NSW Ministry of Health (as required).	Inspect site capping and rectify (if required) to minimise precipitation infiltration and hence leachate generation. Undertake monitoring of groundwater and surface waters.
Run-off of contaminated water (in particular with respect to surface waters along the eastern boundary).	Contamination of water ways and impact on the environment.	Cumberland City Council, NSW EPA.	Minimise exposure and migration of soils, installation of silt fences, investigate source/location of contaminants, monitoring of surface water quality.

4. Community Engagement

Community engagement is required for all pollution incidents with the objective of keeping those impacted and the broader community informed, initially during the incident and ultimately once the incident has been resolved. Depending on the nature of the pollution incident, final resolution may take place over an extended period (e.g., months and years) in which case periodic updates are

required to be provided to the community even where limited works may have been undertaken in the intervening period between updates (e.g., during a groundwater monitoring program).

4.1 Critical Pollution Incident

Where critical pollution incidents occur, community engagement is at the direction of the emergency service organisation in charge of managing the incident. Engagement actions will be dependent on the nature and risk of the incident and may include:

- Door knocking;
- Telephoning;
- SMS of people in the area (using emergency service capabilities);
- Media announcements (radio, TV);
- Council providing updates on its website; and
- Community meetings.

This may involve members of Council and other organisations assisting with the engagement of neighbours and the broader community where seen appropriate by the emergency organisation in charge.

4.2 Non-Critical Pollution Incident

Where a non-critical pollution incident occurs, this is to be initially managed by Council in its capacity as the site owner. When deemed suitable, responsibilities may be forwarded to another appropriate organisation (e.g., NSW EPA, NSW Ministry of Health) upon agreement between the parties. The organisation in charge of managing the incident is also responsible for community engagement. Engagement actions will be dependent on the nature and risk of the incident and may include:

- Letter drops;
- Door knocking;
- Telephoning;
- Council providing updates on its website; and
- Community meetings.

5. Actions to Minimise Potential Pollutant Incidents

To minimise the risk of the pollution incidents, the following site management practices are to be implemented by Council:

- Limit access to authorised personnel only (e.g., maintenance of site fences, site visit registry maintained by Council);

- Maintain vegetation (grass, shrubs, trees) coverage across the site to minimise the potential for infiltration, erosion and airborne dust from exposed soils;
- Minimise disturbance of soils until final closure plans and actions are enacted;
- Closure plans to include monitoring programs for landfill gas and groundwater quality to confirm landfill gas and groundwater contaminant concentrations at the site's surface and boundaries post-closure works;
- Maintenance of groundwater and landfill gas wells to allow monitoring at short notice if required; and
- Review the site's fire risks on a regular basis as part of Council's management requirements for its properties and undertake site specific fire mitigation activities as required.

6. Implementation and Management of PIRMP

Consistent with the statutory requirements for the PIRMP, a hard copy of this plan should be kept on site. However, given that waste is no longer being accepted, there are no daily activities on the site, no buildings are present and site access is limited to Council authorised personnel, at a minimum the PIRMP should be held on-site by the person in charge when personnel are present. At all other times a hard copy is to be held by the Council Officer in charge of the site's day-to-day management. At the time of writing this is Council's Executive Manager - Recreation and Facilities.

As a minimum, two members of Council are to be trained to become fully conversant with the contents and implementation of this PIRMP. Both members should not be on leave concurrently. In this regard, it may be beneficial to have more than two staff members who have this capability.

As part of the site induction, all authorised personnel on-site are to be aware and have general knowledge of the contents of this PIRMP. Importantly, as part of the site induction this is to include the site evacuation procedures and identification of the muster location on Hyland Road.

A review and update (if required) of this PIRMP is to be undertaken by the Council staff in charge of the PIRMP's implementation at least every 12 months. An update may be required due to *inter alia* changes in site features, Council's management structures (e.g., different personnel responsible for the site) and changes to use of neighbouring land or properties. As part of this review the plan is to be tested to confirm that it is accurate, up to date and capable of being implemented (e.g., desktop simulation, practical exercise and drills).

This plan and any subsequent updates are to be uploaded on Council's website to allow public access.

7. Limitations

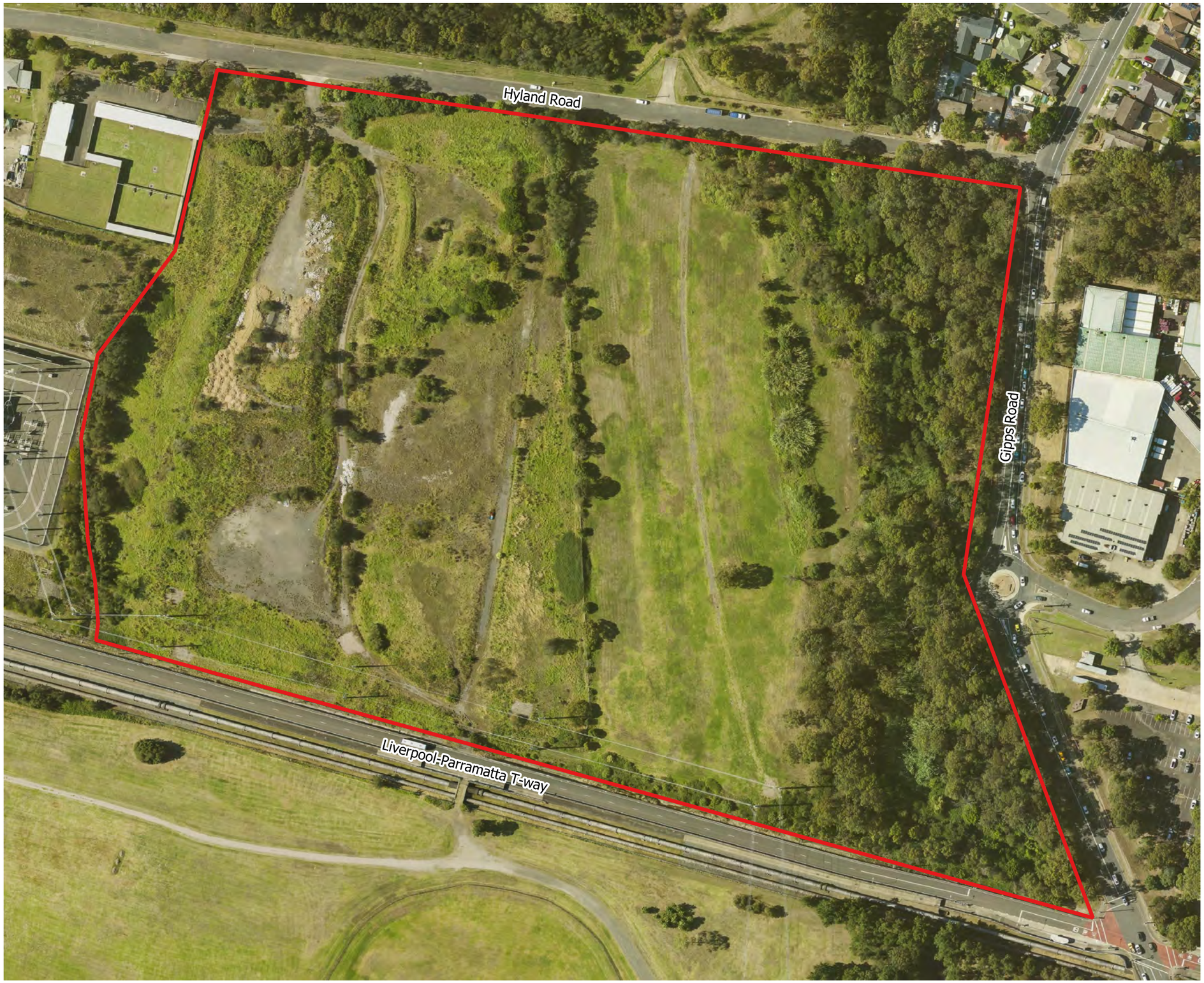
Douglas Partners Pty Ltd (DP) has prepared this report for this project at Hyland Road Landfill, Greystanes as per DP proposal dated 16 September which was accepted by Holroyd City Council (now Cumberland City Council) on 20 November 2015. This report is provided for the exclusive use of Cumberland City Council (formerly Holroyd City Council) for the specific project and purpose as described in the report. It should not be used by or relied upon for other projects or purposes on the site or other sites, or by a third party.

DP has relied upon certain information provided to it by Holroyd City Council/Cumberland City Council and its contractors. Therefore DP has made the reasonable assumption that all the information provided is accurate and correct. Any interpretation or recommendation that stem from information that may be incorrect or inaccurate is considered to be beyond DP's responsibility.

Douglas Partners Pty Ltd

Appendix A

Drawing



LOCALITY MAP

Notes:
1. Basemap from metromap.com.au (dated 09/12/2020).
2. Boundary is approximate only.

Legend

Site Boundary

0 10 20 m

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CLIENT:	Cumberland City Council		
OFFICE:	Sydney	DRAWN BY:	JH
SCALE:	1:2250 at A3	DATE:	29.01.2021

TITLE: **Site Location**
Hyland Road Landfill, Pollution Incident Response Management Plan
Hyland Road Landfill, Hyland Road, Greystanes

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PROJECT No:	84813.01
DRAWING No:	1
REVISION:	0

Appendix B

Notes About this Report

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.