

It is our opinion that a landform resulting from placement of the remediated material to a specifically developed earthworks specification would be suitable for use as parkland, laydown area or stabling yards.

If further, more complex development of the site is proposed (e.g. commercial, light industrial or residential buildings), sorting of the remediated material, and importing of higher quality fill may need to be considered.

We recommend that a detailed earthworks specification for the site be prepared. We consider that the earthworks specification should address at least the following:

1. Subgrade preparation and base geometry requirements.
2. Material requirements, including a clear definition of:
 - Suitable and unsuitable material.
 - Grading or maximum particle size requirements. We note that a conservative definition of maximum particle size may result in some of the materials on site being excluded from reuse as engineered fill. It is our opinion that this restriction may not significantly benefit fill performance.
3. Fill placement requirements, including a clear definition of compacted layer thickness, we suggest 300 mm but this depends upon the material being placed.
4. Compaction requirements. We suggest that a minimum and maximum density ratio be adopted to control any potential shrink swell of the clayey fill material and to limit the effect of fill material variability on the fill performance, we suggest 98 to 102 % standard in the clays typical of Sydney subsurface profiles.
5. Moisture control requirements. We consider that control on placement moisture variation should be adopted to control any potential shrink swell of the clayey fill material, we suggest moisture variation of $\pm 2\%$ for typical Sydney conditions.
6. Inspection and testing requirements, including a clear definition of:
 - Level of control testing, e.g. Level 1 as per AS3798-2007.
 - Lot testing, this is an important aspect of earthworks control but often ignored in acceptance of the works.
 - Testing methodology.
 - Testing frequency.
7. Responsibilities of the contractor. We envisage that such responsibilities would include:
 - Undertake the earthworks in accordance with fill specification.
 - Seek approvals by the GITA as required by the fill specification, in particular prior to placing any new fill.
8. Responsibilities of the Geotechnical Testing and Inspection Authority (GITA). The fill specification should define:

- The inspection and testing responsibilities of the GITA.
- The reporting responsibilities of the GITA.
- The final certification responsibilities of the GITA. We note that the specification should require the GITA to certify that "all the earthworks have been documented and have been undertaken in accordance with the relevant fill specification". It is not adequate just to refer to AS3798 Level 1.

Preparation of this earthworks specification is outside the scope of this report.

9.6. Load limits of temporary construction access road

We have assessed the Design Traffic associated with the construction access road based on the assessed conditions as discussed in Section 7.3 of this report and the design chart in Figure 8.4 of Austroads Publication "Pavement Design – A guide to the Structural Design of Road Pavements".

On this basis we consider that the design traffic for the construction access road is in the order of 10^6 ESA (Equivalent Standard Axles). Based on the assessed current condition of the pavement we consider this to be well beyond the traffic likely to be associated with the proposed remediation works.

We note that the asphalt surfacing of the road may however incur damage due to screwing loads or trafficking by tracked vehicles (e.g. excavators, dozers). This damage can be minimised by appropriate management of the site activities. Alternatively, an allowance should be made to resurface the road or portion of it at the completion of the remediation works.

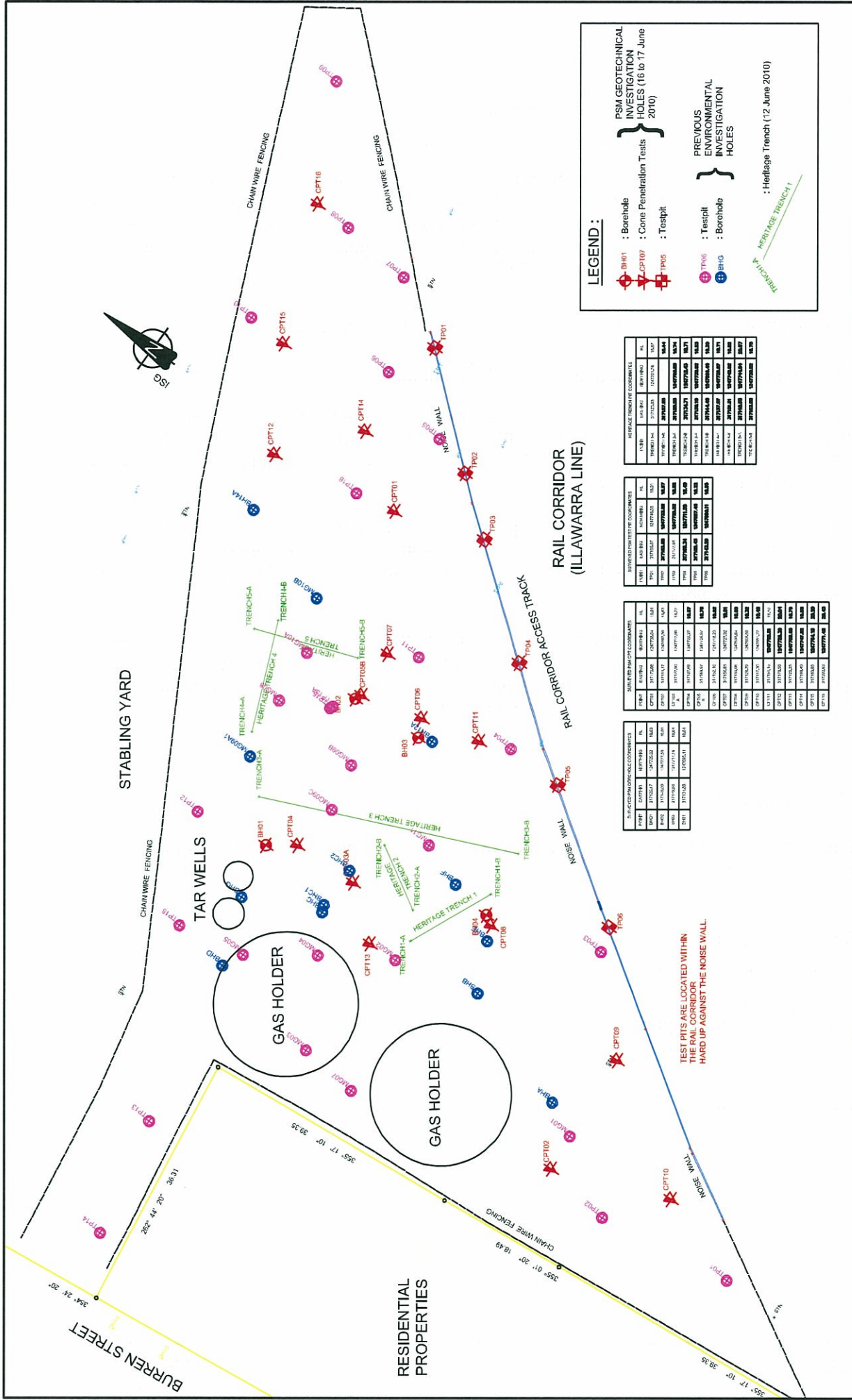
10. GENERAL

If at anytime, the conditions are found to vary from those described in this report, further advice should be sought.

For and on behalf of
PELLS SULLIVAN MEYNINK



GARRY MOSTYN



Notes:

1. Baseplan including site boundaries and locations of PSM Investigation holes and Heritage Trench was taken from dwg "Plan showing borehole, CPT, test pit and heritage trench location within the macdonaldtown gas works site" dated 18 June 2010 by Lynton Surveys Pty Ltd
2. Locations of Gas holders, tar wells and previous environmental investigation holes was taken from Figure 4" Sample Locations Exceeding Site Criteria - All Data" of CH2MHILL final report "Delineation & Characterisation Sampling and Review of Remedial Options - Former Macdonaldtown Gasworks - Burren Street, Erskineville, NSW" dated March 2007.

LEGEND :

PSM GEOTECHNICAL INVESTIGATION HOLES (16 to 17 June 2010)

BH01 : Borehole

TP01 : Cone Penetration Tests

TP05 : Testpit

PREVIOUS ENVIRONMENTAL INVESTIGATION HOLES

BH06 : Borehole

BH07 : Borehole

TRENCH 1 : Heritage Trench (12 June 2010)

RAIL CORRIDOR (ILLAWARRA LINE)

RAIL CORRIDOR ROCKS TRACK

NOISE WALL

CHAIN WIRE FENCING

STABLING YARD

TAR WELLS

GAS HOLDER

RESIDENTIAL PROPERTIES

BURREN STREET

SCALE (1:500 @A3)

0 5 10 15 20 25 m

PSM

Pells Sullivan Meynink

PSM1444.R1

Figure 1

INCILL MANAGEMENT PTY LTD

Macdonaldtown Gasworks Remediation Project

Geotechnical Investigation

LOCATIONS OF PSM INVESTIGATION HOLES & PREVIOUS INVESTIGATION HOLES

INCILL MANAGEMENT PTY LTD

Macdonaldtown Gasworks Remediation Project

Geotechnical Investigation

LOCATIONS OF PSM INVESTIGATION HOLES & PREVIOUS INVESTIGATION HOLES

