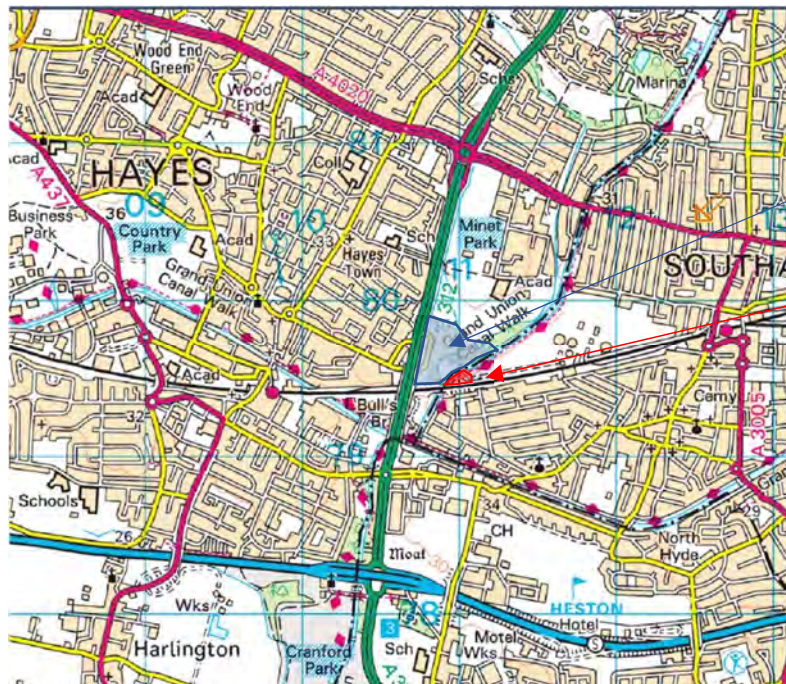


FIGURES

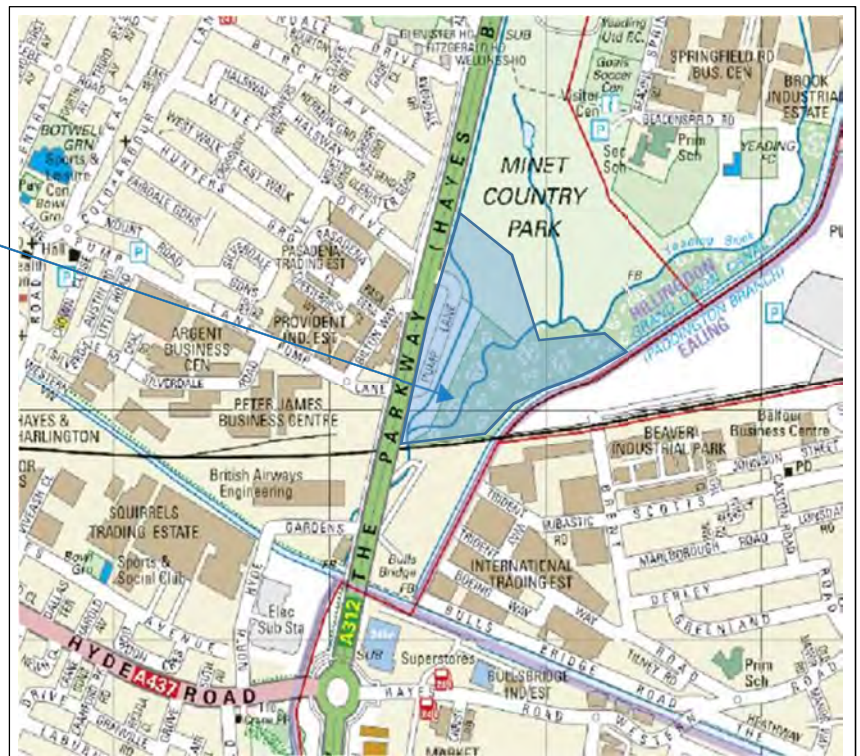


West Grand Union Canal
Borough of Hillingdon

East Grand Union Canal
Borough of Ealing

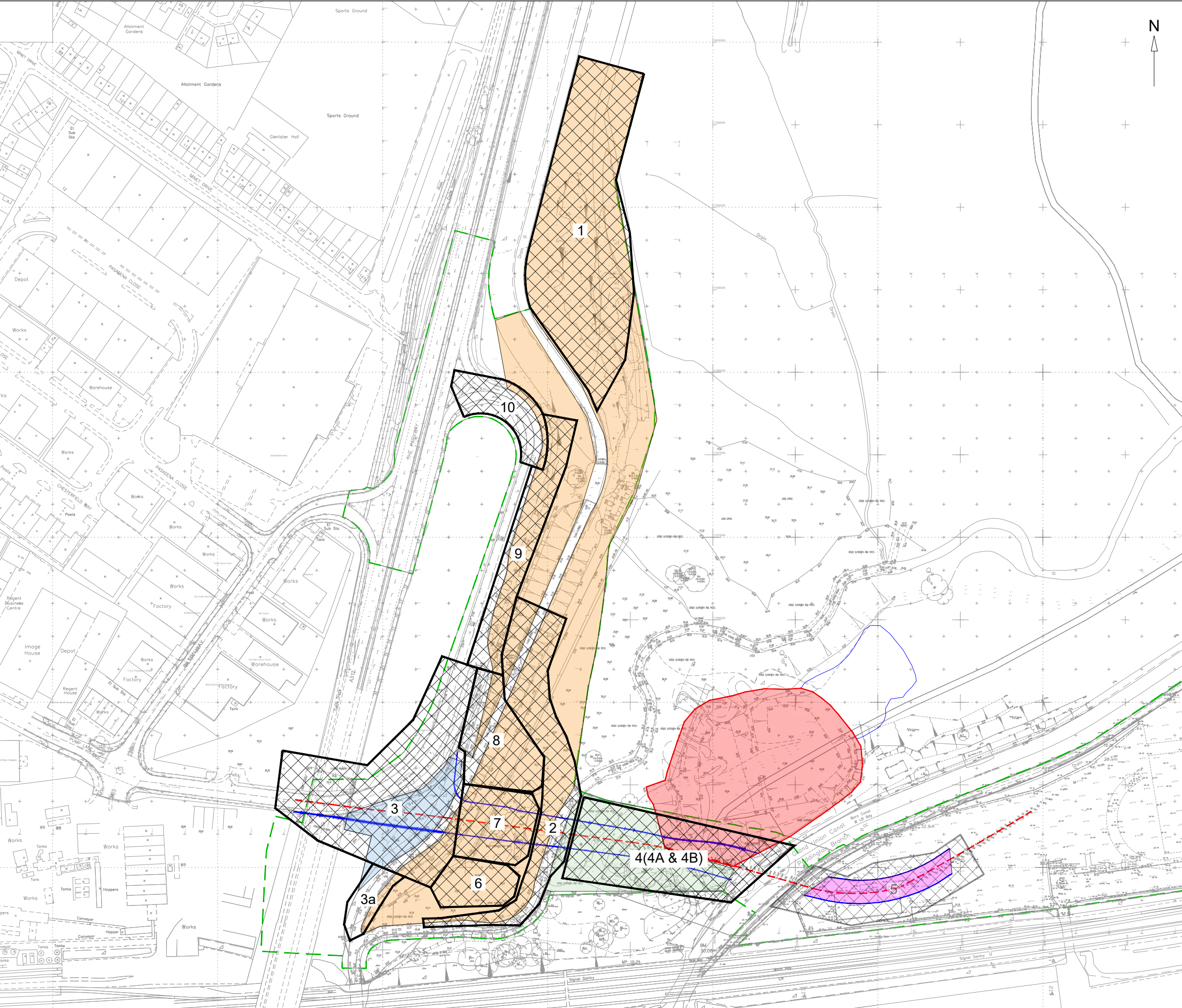


West Grand Union Canal
Borough of Hillingdon



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Client Clark Smith Partnership	Project Western Access, Southall	Job No CG/28308
	Title Site Location Plan	Figure 1



KEY

Western Access Site boundary

Western Access Road Alignment

Indicative embankment extents

Extent of existing Lagoon Bund

'Bridge Bund' relating to investigation undertaken 24th February 2017

Area 1 - River Crane incorporating Western Embankment & Flood Alleviation Zone

Area 2 - Central Embankment

Area 3 - 'Lagoon Bund'

Area 4 - Eastern Embankment

Earthworks zones [1-10]

- Notes
1.

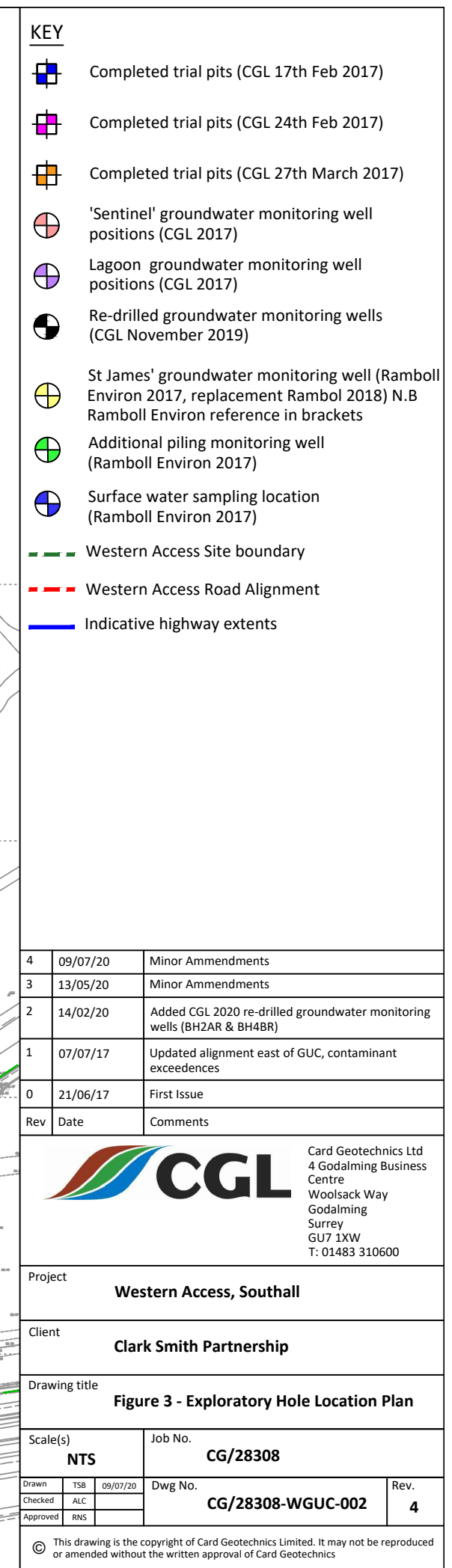
Drawing produced from:
A724-E05-PA-VEC-HW-DR-0001.
2.

Earthworks zones and cut/fill values taken from CCE Drawing 'EARTHWORKS PLAN FORMATION LEVEL TO PROPOSED DESIGN' (A729-E05-IW-CCE-EW-DR-0600) - P7 (13.09.17).
3.

WGUC = West Grand Union Canal.

0	01/10/18	
Rev	Date	Comments
CGL Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW T: 01483 310600		
Project Western Access, Southall		
Client Clark Smith Partnership		
Drawing title Figure 2 - Site Layout Plan - WGUC		
Scale(s) NTS		Job No. CG/28308
Drawn TSB 01/10/18	Dwg No. CG/28308-WGUC-001	Rev. 0
Checked CRG 23/10/18		
Approved RNS 24/10/18		

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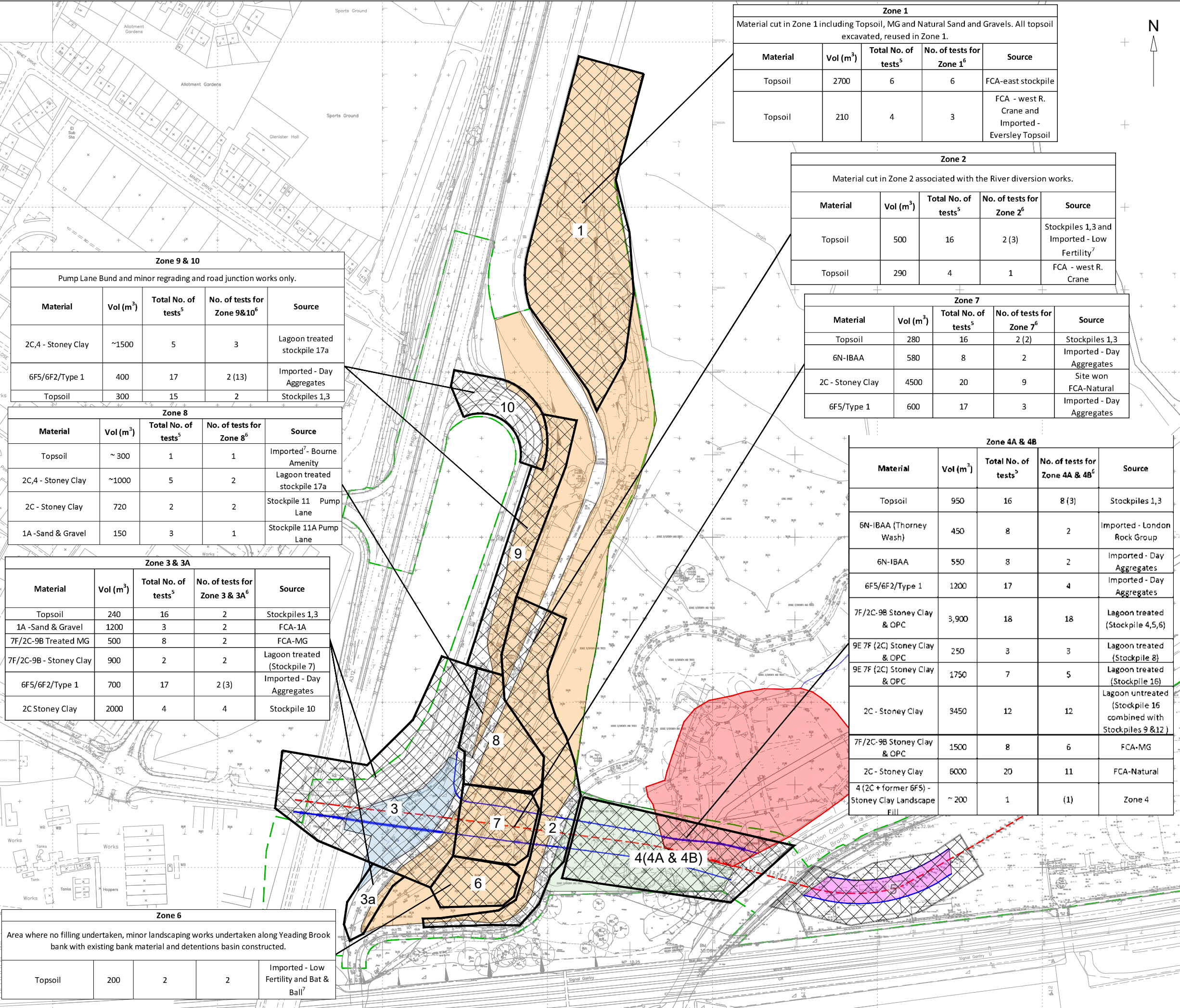


CGL

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Project	Western Access, Southall											
Client	Clark Smith Partnership											
Drawing title	Figure 3 - Exploratory Hole Location Plan											
Scale(s) NTS	Job No. CG/28308											
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Drawn</td> <td style="width: 15%;">TSB</td> <td style="width: 15%;">09/07/20</td> </tr> <tr> <td>Checked</td> <td>ALC</td> <td></td> </tr> <tr> <td>Approved</td> <td>RNS</td> <td></td> </tr> </table>	Drawn	TSB	09/07/20	Checked	ALC		Approved	RNS		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;"> Dwg No. CG/28308-WGUC-002 </td> <td style="width: 20%; text-align: center; vertical-align: middle;"> Rev. 4 </td> </tr> </table>	Dwg No. CG/28308-WGUC-002	Rev. 4
Drawn	TSB	09/07/20										
Checked	ALC											
Approved	RNS											
Dwg No. CG/28308-WGUC-002	Rev. 4											

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KEY

Western Access Site boundary

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Area 1 - River Crane incorporating Western Embankment & Flood Alleviation Zone

Area 2 - Central Embankment

Area 3 - 'Lagoon Bund'

Area 4 - Eastern Embankment

Earthworks zones [1-10]

Notes

1. Drawing produced from: A724-E05-PA-VEC-HW-DR-0001.

2. Earthworks zones and cut/fill values taken from CCE Drawing 'EARTHWORKS PLAN FORMATION LEVEL TO PROPOSED DESIGN' (A729-E05-IW-CCE-EW-DR-0600) - P7 (13.09.17).

3. WGUC = West Grand Union Canal.

4. Showing the cut and fill volumes of site won-imported material.

MG = Made Ground (Site won)

FCA = Flood Compensation Area

IBAA = Incinerator Bottom Ash Aggregate (import)

SP = Stockpile

6N = Class 6N (import)

RDC = River Diversion Channel

OPC = Ordinary Portland Cement

5. Materials were sampled at source or stockpile prior to fill placement. This includes combined number tests undertaken by Cognition and CGL.

6. No. of tests pro-rated for material volume on each zone. Where applicable, No. of additional tests undertaken on placed material in the zone is given in brackets.

7. Specification for imported Bourne Amenity topsoil provided by supplier, and verification reports for other imported topsoil provided by kingfisher Landscape Group.

3

20/04/2021

Minor revisions to verification tables

2

21/04/2020

Minor amendments to notes

1

19/02/2020

Revisions to verification tables

DRAFT

16/01/2020

Revisions to table and addition of topsoil/landscape fill data

0

22/10/18

Rev

Date

Comments

CGL

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Project

Western Access, Southall

Client

Clark Smith Partnership

Drawing title

Figure 4 - Verification Plan - WGUC

Scale(s)

NTS

Job No.

CG/28308

Drawn

TSB

22/10/18

Checked

ALC

21/04/20

Approved

RNS

21/04/20

Dwg No.

CG/28308-WGUC-003

Rev.

3

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FMC-SS-WE-076-C
03.11.2017
Dwg:NTS
Rev C: Stockpile 18 moved to correct location
For Guidance Only

This drawing shows the volume and classification types of stockpiles located on the western access site. These volumes are based on a survey carried out on the 10:00hrs 03.11.2017
Drawing amended 06.11.2017 due to stockpile 18 moved to correct location (Volumes not amended- will be picked up on the 10.11.2017)

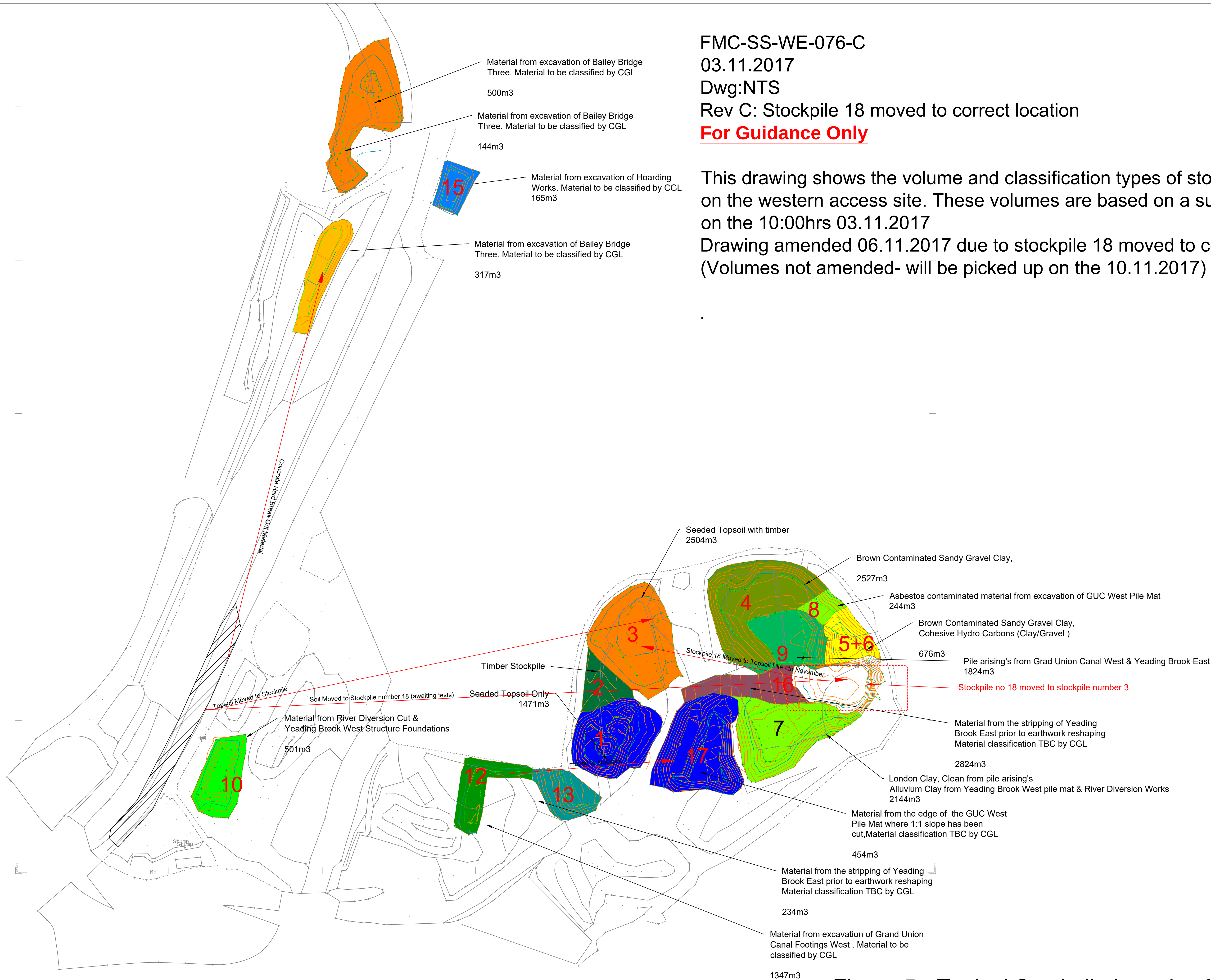
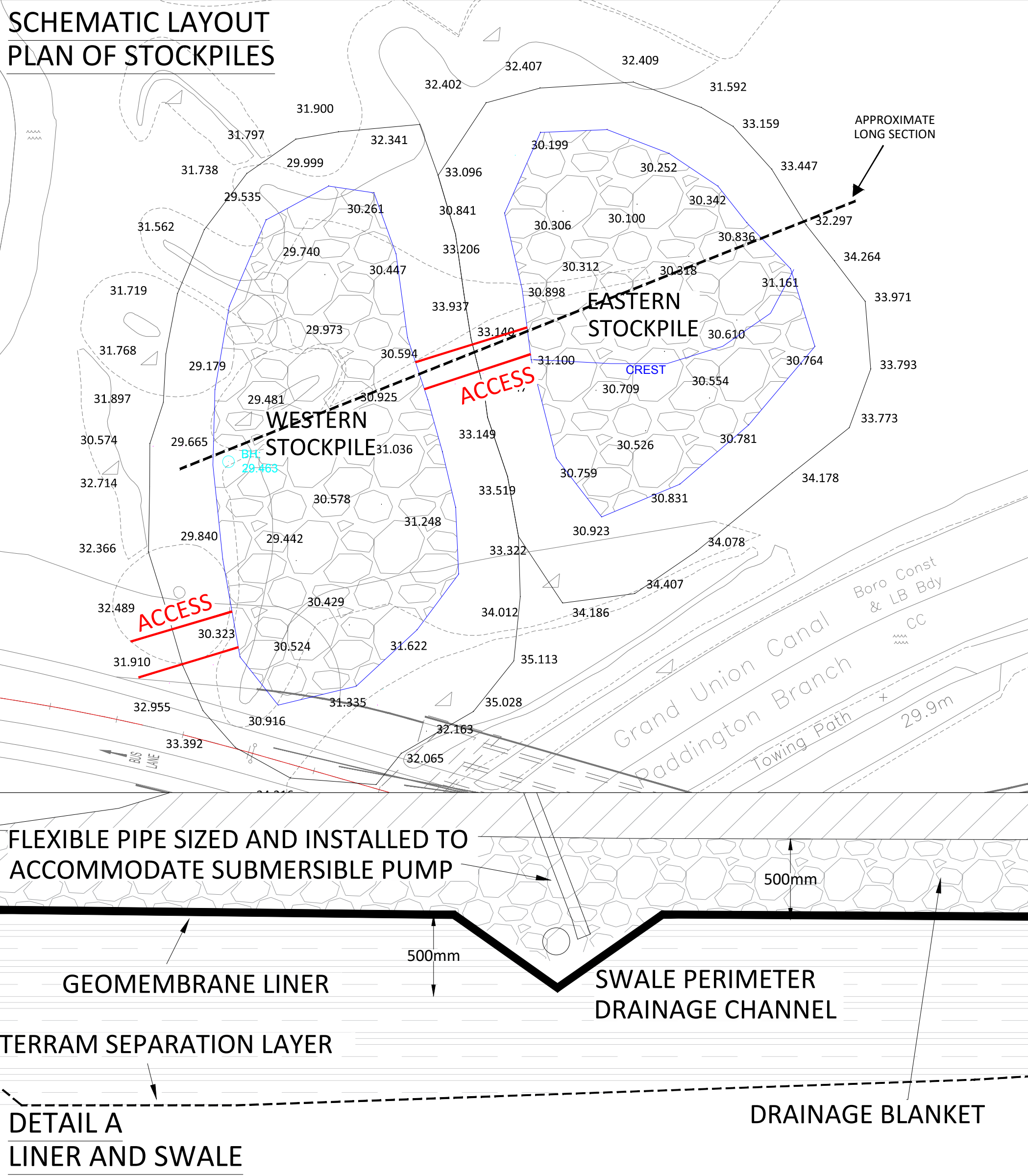
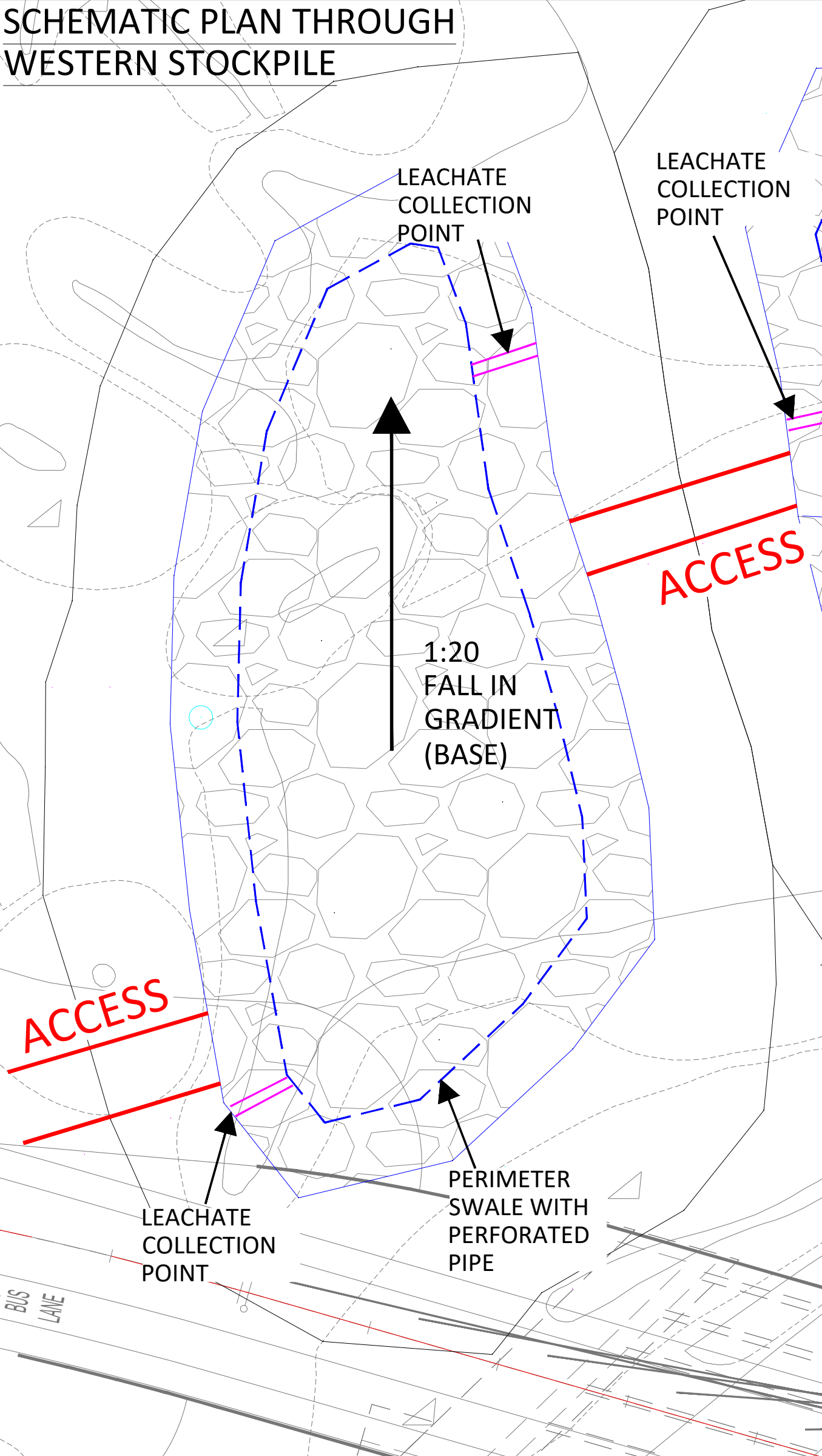


Figure 5 - Typical Stockpile Location Numbering

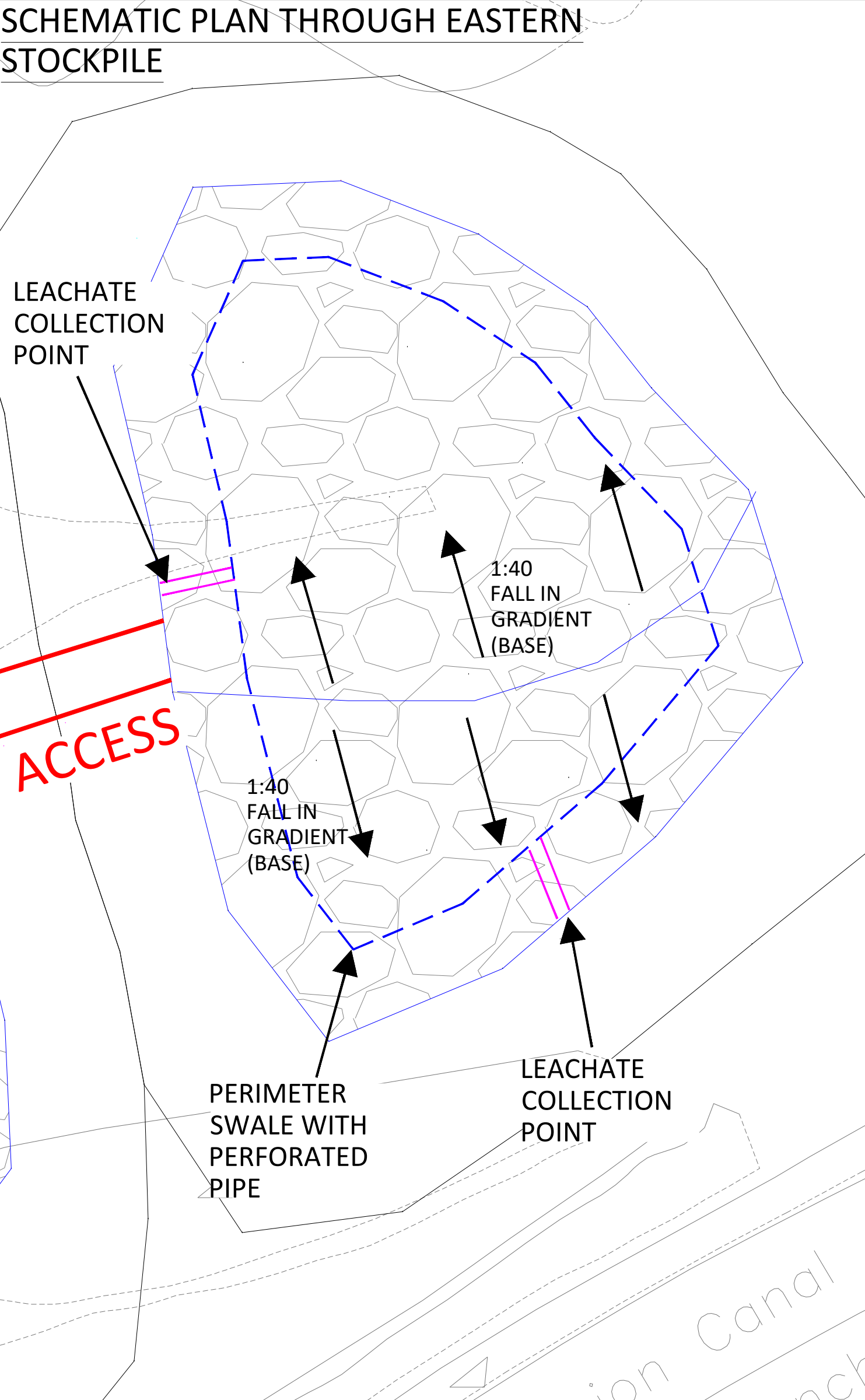
SCHEMATIC LAYOUT
PLAN OF STOCKPILES



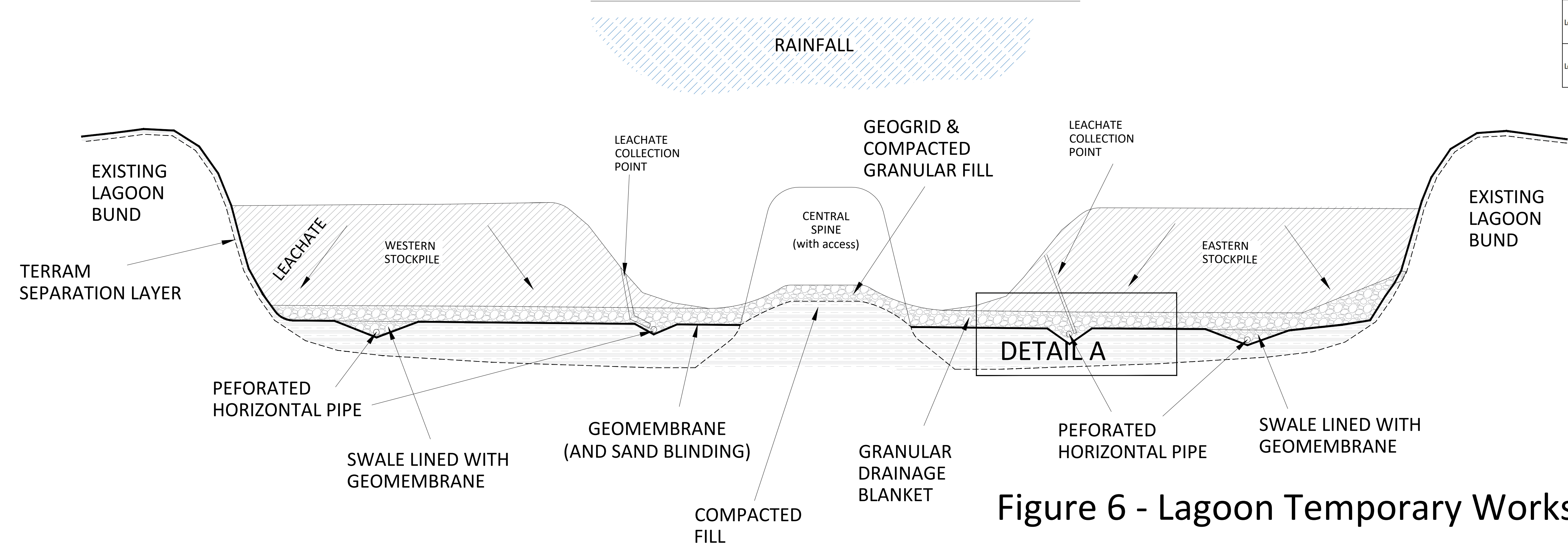
SCHEMATIC PLAN THROUGH
WESTERN STOCKPILE



SCHEMATIC PLAN THROUGH EASTERN
STOCKPILE



SCHEMATIC LONG SECTION THROUGH LAGOON STOCKPILES



Component	Requirements	Details/Specification
Configuration & Access	General	Two stockpiles are to be formed within the existing lagoon (western and eastern stockpiles), with access to the western stockpile from the south west and for the eastern stockpile to be formed through the central spine. Perimeter access to the eastern stockpile and access through the central spine will need to be maintained. The access points will be constructed with a terram separator laid on existing ground with overlying geogrid and approximately 300mm compacted granular fill (6F5 or similar).
Basal preparation	Separation layer	A geotextile (Terram GT series or similar) to be placed on existing lagoon floor with overlap of 300mm between rolls. Geotextile to be extended up sides of lagoon bund to a sufficient distance, and be suitably anchored, to prevent imported fill layer mixing with existing lagoon materials.
	Compacted Fill	Suitable site won or imported fill to be placed and compacted on existing lagoon floor, over separation layer, to create cross falls for the blanket drainage layer. The layer of fill to be of sufficient thickness to accommodate depth of drainage channels without disturbance of existing ground level.
Basal liner	Geomembrane	Impermeable geomembrane (HDPE, LLDPE or PP) placed and jointed / welded in accordance with manufacturer's standard requirements. Geomembrane to be provided by suitable manufacturer e.g. Geosynthetics, Monarflex with 50mm thick sand blinding above. Installation to be certified.
Drainage	Blanket drainage layer	500mm thick granular layer, comprised of suitable drainage material (SHW Series 500), to be placed above geomembrane and beneath stockpile, as per stockpile section drawing. Care to be taken to avoid puncturing underlying geomembrane.
Drainage	Drainage channels	Drainage channels (swales) should be 600mm wide and 500mm deep, and are to be dug around perimeter of stockpile area, as shown on the drainage channel section. The base of the drainage channels should be lined with the impermeable geomembrane, which should extend continuously beneath the entire drainage layer and be suitable anchored beyond the walls of the lagoon bund. The lined drains should then be filled with a suitable drainage material (SHW Series 500), as shown on the drainage channel section drawing.
Leachate collection	Sumps	Leachate generation estimated based on approximate 700m ² stockpile area, assuming a regionally average monthly rainfall of 93mm per month. Two leachate collection points are required to be constructed for both stockpiles, as shown on stockpile section. The perimeter drainage channel should be constructed as a swale, including a perforated horizontal pipe with collection points. The perforated pipe and collection pipes should be of sufficient size/diameter to allow for pumping. A narrow flexible submersible pump should be installed within the collection point pipe, extending above the maximum stockpiling level.
Leachate collection	Pumping	Leachate collection via pumping from leachate collection points, as per stockpile section. Pumping on a weekly frequency and following periods of rainfall.
Leachate collection	Collection and disposal	Leachate to be pumped to holding tanker, and disposed of off-site via a suitably licenced carrier on a weekly basis. Allowance to be made for pumping and disposal.

General Notes

- Plans and sections are schematic only
- Stockpile dimensions to be determined by the Contractor based upon working area in existing lagoon bund.
- Existing lagoon bund configuration will require two separate stockpiles with independent drainage systems, due to central bund.
- Access into lagoon bund and between stockpile configurations is to maintain similar material separation as for the main stockpile.
- Material stockpiles and surface drainage to be determined by the Contractor based upon their earthworks methodology.

1	26/05/17	FOR TENDER PURPOSES
0	19/05/17	FOR TENDER PURPOSES
Rev	Date	Comments
Card Geotechnics Ltd 4 Godalming Business Centre Woodstock Way Godalming Surrey GU7 1YW T: 01483 310600		
Project	Southall Western Access	
Client	FM Conway	
Drawing title	Lagoon Stockpile Lining Schematic	
Scale(s)	Job No.	CGN/037321
NTS	Drawn	19/05/17
Drawn	Drawn	19/05/17
Approved	Approved	19/05/17
A720-E05-IW-CGL-EW-DR-0001		1
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Figure 6 - Lagoon Temporary Works Detail