

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	05/11/2018 09:30 to 12:30	VISIT BY:	ALC
WEATHER:			
Time	Description		
09:00 to 15:30	Cool, drizzly		
SVR 116			

Site operations

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| Work in hand | <ul style="list-style-type: none"> Site walkover and inspection of scour protection rockfill and construction. |
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Observations

Scour Protection

The newly imported larger stone for the scour protection appears to be between 300mm and 600mm in size (Photo 1). FMC breaking the larger pieces so that the average size is around 200mm to 300mm and constructing the scour protection to East Yeading Brook north wing wall.

Anne (CGL)/Trevor (FMC) agreed in principal (subject to CGL formal approval) the following refined scour protection design details:-

- overlap Terram at top of stone on slope prior to placing topsoil on the upper half of the slope. Terram to be cut once topsoil is placed. This will prevent migration of fines into the rockfill;
- anchor the Terram in a trench around the scour protection at ground level. Trench to be backfilled with arisings;
- rockfill to be placed such that the smaller stone at the toe of the slope is buttressed by the larger stone at the base. Pack gaps in between larger stone with smaller stone;
- Smaller rockfill already placed on East YB southern embankment to remain but replaced with larger stone size 3.0m from toe of slope (Photo 2).

ALC noted the following concerns with regard to the stability of the embankment are:-

- Standing water within the scour protection excavation, and ponding at the toe of slope. There is no embankment toe drainage in this area;
- Along the full length of the EYB north embankment FMC have levelled the ground, effectively undercutting the toe with a 0.5m high vertical cut (Photo 3). This has been done so plant can access the scour protection area. The fill needs to be reinstated as soon as possible, particularly as heavy and persistent rainfall could exacerbate the potential risk of instability. The plant can't currently access the scour protection working area as the ground is too soft, so the slope is unlikely to be reinstated this week.

East GUC south extension of landscape fill

FMC are proposing to extend the landscape fill in front of the East GUC wing wall to 3.0m offset from the toe of the railway embankment (Photo 4). There are at least two drainage pipes visible in the railway embankment but it is not known if these are redundant; no toe drainage to the railway embankment was visible. The fill extension will also limit access to the bridge for maintenance.

West GUC south landscape fill FMC have placed landscape fill against the front of the West GUC south wing wall at the request of Berkley who wanted the black waterproofing to be covered over (Photo 5). The fill is to be extended further out. No geoenvironmental testing has been undertaken on this material. The fill has just been tracked in. ALC advised FMC that the new fill is to be benched in.
Sampling and/or testing undertaken or observed No sampling undertaken.
Other comments and observations (ecological concerns? Water observations? Anticipated issues?) None
Correspondence requested by FMC/CGL Scour Protection - FMC to provide gradings for the stone imported to date; - FMC to update the previously issued marked up drawing with refined details described above and issue to CGL for approval. - CGL to confirm reinstatement details to East YB north embankment at toe; East GUC south wing wall landscape fill - FMC to confirm if fill to East GUC wing wall is to be extended towards railway embankment. If confirmed, CGL to advise FMC on geotechnical considerations/recommendations with respect to railway embankment. Other Actions - CGL to provide summary statement on Human Health for reuse of FCA (topsoil) following contaminants testing. This to be provided ahead of letter report.
Correspondence received from FMC None

Summary photos



Photo 1. Scour Protection – imported large stone (prior to breaking)



Photo 2 East YB south scour protection. Larger stone to be placed at slope toe.



Photo 3 East YB north scour protection and undercut slope toe



Photo 4 Proposed East GUC south landscape fill in front of wing wall to 3.0m offset from toe of railway embankment



Photo 5 Newly placed landscape fill to West GUC south wing wall

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	10/12/2018 09:30 to 16:00	VISIT BY:	CRG
WEATHER:			
Time	Description		
09:30 to 16:00	Dry, sunny and warm with light winds		

Site operations

Work in hand	CGL to undertake trial pitting in SP17 to provide suitable soil samples for environmental testing.
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Summary of works

CGL attended site on Monday 10th December 2018 to undertake 1 day's trial pitting across SP17 to obtain suitable soil samples at depth within the stockpiled material for environmental testing.

On visual inspection of the stockpiled material, it was clear that SP17 was more extensive than previously understood and comprises three separate stockpiles, referenced herein as SP17A, SP17B and SP17C respectively. SP17A was the largest stockpile located furthest west in the lagoon where no:3 trial pits were excavated to cover its full extent. SP17B was comparatively smaller and bounded by a pedestrian walkway along its western edge, no:2 trial pits were excavated in this stockpile to cover its full extent. SP17C was the smallest of the stockpiles, located furthest east adjacent to CGLs BH3A, a single pit was excavated in this stockpile.

In total no:5 trial pits were excavated across the three stockpiles and a sample was obtained from the upper (GL to 1.5m) and lower (1.5m to 4.2m) sections in each pit to provide a good representative sample of the material.

The composition of the stockpile material was highly variable comprising of a loose dark grey brown to brown very silty gravelly SAND or soft to firm dark orange brown to brown mottled grey black sandy very gravelly CLAY. The sand was medium to coarse grained and gravel was subangular to well-rounded flint, concrete and brick. A number of deleterious items were identified including fragments of textile, metal, tile, ceramic, plastic, glass, timber and dredged organic matter.

Chemical testing of SP17 was increased from 4 to 8 to accommodate the additional stockpiles and provide suitable coverage of the material.

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Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	11/12/2018 09:30 to 16:00	VISIT BY:	CRG
WEATHER:			
Time	Description		
09:30 to 16:00	Warm dry and sunny day with cloudy intervals in the afternoon		

Site operations

Work in hand	CGL to undertake trial pitting the in lagoon basal material and underlying strata.
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Summary of works

CGL attended site on Tuesday 11th December 2018 to undertake 1 day's trial pitting of the lagoon's basal material and underlying strata and obtain suitable soil samples for chemical analysis.

A total of 8 trial pits were excavated in the base of the lagoon to 1.0m below ground level (bgl) in areas not previously tested in recent trial pitting works undertaken by Blackwell. The lagoon basal material comprised of a shallow imported capping layer of 6F2 of between 0.2m and 0.4m thick. 6F2 was placed on a layer of terram membrane of which was installed by Butek. An environmental sample of the lagoon basal layer was taken in each of the 8 trial pits (TP1– TP8). Excavation continued in each trial pit to a maximum depth of 1.0m bgl to enable sampling of the underlying basal material (B) where samples of the underlying material were taken (TP1– TP8).

The basal material underlying the lagoon was comprised of a soft to firm light grey to brown very gravelly sandy clay. Gravel was angular to rounded, fine to coarse of flint, brick and concrete. Limited perched water was noted on top of the membrane at the base of the 6F2 capping.

Each trial pit was sampled, photographed and back filled on completion.

Trial pit location plan



Summary photos



TP1 location overview



TP1 excavation to 1.0m bgl



TP2 location overview



TP2 excavation to 1.0m bgl

	
TP3 location overview	TP3 excavation to 1.0m bgl
	
TP4 location overview	TP4 excavation to 1.0m bgl
	
TP5 location overview	TP5 excavation to 1.0m bgl
	
TP6 location overview	TP6 excavation to 1.0m bgl
	
TP7 location overview	TP7 excavation to 1.0m bgl

	
TP8 location overview at lagoon entrance	TP8 excavation to 1.0m bgl

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	04/04/2019 09:30 to 14:00	VISIT BY:	ALC
WEATHER:			
Time	Description		
09:15 to 15:30	Cool, sunny, intermittent drizzle		
SVR 122			

Site operations	
Work in hand	Site walkover and inspection of scour protection rockfill and construction.
Observations Lagoon Stockpiles Newly stockpiled topsoil from FCA west side has been riddled (approx. 500m³). Approx less than 100m³ from oil drum spill area in FCA has been stockpiled separately. Tree Pits Tree pits being constructed and trees planted to EYB north side.	
Sampling and/or testing undertaken or observed Sampling below liner in north area of lagoon (TP101, 102 & 103) to delineate contaminant hotspot. Sampling SP 17A, 17B and 17C to assess suitability for reuse or waste classification TP106 & 107).	
Other comments and observations (ecological concerns? Water observations? Anticipated issues?) Construction of tree pit installations was observed to be in accordance with the construction drawing previously approved by TFL.	
Correspondence requested by FMC/CGL CGL to assess suitability of reuse for SP17A, 17B and 17C and suitability for reuse of material beneath lagoon liner, following testing of samples.	
Correspondence received from FMC None	

Summary photos



Photo 1. Example of material sampled beneath liner in lagoon.



Photo 2 Location of trial pitting and sampling beneath liner in lagoon.



Photo 3 Tree pit installation in Zone 4.



Photo 4 Tree pit installation in Zone 4.



Photo 5 Compacting fill on geotextile and benching following tree pit installation.



Photo 6 Completed installation and backfilling of tree pits.

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	05/07/2019 09:30 to 17:00	VISIT BY:	ALC
WEATHER:			
Time	Description		
09:30 to 17:00	Very warm, sunny		
SVR 123			

Site operations

Work in hand	1. Jet washing timber from stockpile SP2 2. Review and discussion on planned works for lagoon bund relocation 3. Sampling topsoil stockpile and unsuitable topsoil for disposal 4. Investigation of standing water in railway triangle 5. Site walkover and inspection of scour protection completion.
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Observations

1. Jet washing timber in Lagoon

Jet washing timber from stockpile SP2 to remove invasive species spores prior to disposal off site.

2. Lagoon 'Topsoil' Stockpiles

T.Cole (FMC) outlined the proposals for relocation of the lagoon bund. The existing southern stretch of the bund adjacent to the Western Access highway currently encroaches across the TFL/Canals and River Trust's (CART's) boundary line. The planned works are to effectively 'move' the existing bund material further north and reconstruct the bund using the existing material such that the toe of the bund will be realigned within the CART's land. This will involve excavation into the Minet Tip material. A. Curtis (CGL) stated that a watching brief should be undertaken during the reconstruction of the bund to identify potential contaminants.

3. Lagoon 'Topsoil' Stockpiles

The remaining topsoil stockpiled in the lagoon has been segregated into two stockpiles, one stockpile for reuse (approx. 700m³) and the second (approx. 600m³) as unsuitable material for disposal offsite. The material for disposal was being mucked away during the site visit. T. Cole requested sampling and testing be undertaken on both stockpiles – reuse testing for topsoil deemed to be acceptable, and WAC testing for the material to be disposed off site.

4. Railway Triangle Standing Water

Standing water and soft areas have been observed within the railway triangle. Hand pitting was undertaken during the site visit, to attempt to identify the source of the standing water, depth and extent. Seven hand pits were excavated between 0.3m and 0.7m bgl. Site sketch of hand pit locations is shown below.

Standing water was recorded between 0.3m and 0.6m bgl, beneath the topsoil or within clayey gravel beneath the topsoil. Water seepage was noted in HP4 and HP7 along the southern boundary – this appeared to tie in with the areas where vegetation is becoming established. No seepage was observed in HP5, also located along the southern boundary, however a woven geotextile was encountered at 0.3m bgl in HP5, and the overlying topsoil was damp. Two pits were excavated at the toe of the embankment.

From these observations the source of the standing water does not appear to be originating from the embankment fill, or from beneath the embankment. Historically, the 'triangle' has always been prone to soft ground and it is most likely the source of the water is from the canal, due to leakage. A. Curtis recommended further machine excavation to confirm the exact extent of the 'soft' area and standing/shallow water. T. Cole suggested constructing a small cut off 'bund' along the boundary perimeter however it is likely that water will still find a way around or beneath this, having a natural tendency to 'flow' towards Yeading Brook. A. Curtis advised a grip drain may be more appropriate to allow it to drain more freely to reduce standing water. No final decision was made. T. Cole to consider options over next few days.

5. Site walkover and inspection of scour protection completion.

A. Curtis conducted a walkover of all three areas of the scour protection placed to Yeading Brook wingwalls. The scour protection appeared to be satisfactorily installed on top of a non-woven geotextile Terram liner which extended up the sides of the rockfilled excavations. Topsoil has been placed satisfactorily to all embankment side slopes level with the top of the scour protection. Some topsoil has yet to be placed around the toe of the rockfill at the northwest and southeast wingwalls.

Sampling and/or testing undertaken or observed - Topsoil stockpile (for reuse) – 3 samples taken and tested for reuse plus asbestos ID screen. Asbestos quantification to be undertaken if asbestos is identified. - Topsoil (unsuitable) for disposal off site – 3 samples taken. 2 samples scheduled for WAC testing (based on 1 per 500m3).
Other comments and observations (ecological concerns? Water observations? Anticipated issues?) ALC confirmed scour protection constructed satisfactorily and in accordance with CGL's design.

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Correspondence requested by FMC/CGL

T.Cole (FMC) requested A. Curtis (CGL) to submit updated costs for site works/testing/review/reporting of results to FMC for approval.

T. Cole (FMC) requested site attendance by A. Curtis (CGL) to provide watching brief next week for trial holes in Minet Tip/lagoon bund wall with soil sampling if required, and to observe further investigative work to remedy ponding water in the railway triangle. ALC to confirm costs and rates prior to site visit and update costs once testing requirements are known following the site visit.

Correspondence received from FMC

None

Summary photos



Photo 1. Jet washing timber from stockpile SP2 to remove invasive species spores prior to disposal off site.



Photo 2 Unsuitable 'Topsoil' stockpiled in lagoon – removed off site for disposal.



Photo 3 High groundwater encountered in hand dug pits within 'Railway Triangle' area



Photo 4 Completed rock scour protection on Terram geotextile separator

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	09/07/2019 08:30 to 16:00	VISIT BY:	ALC
WEATHER:			
Time	Description		
08:30 to 16:00	Very warm, sunny		
SVR 124			

Site operations	
Work in hand	1. Lagoon bund wall (Minet Tip) watching brief and sampling of trial pits; 2. Sampling of lagoon bund wall/Minet Tip soil for reuse testing; 3. Observation of further investigative work into standing water in railway triangle
Observations 1. Lagoon bund wall (Minet Tip) watching brief and sampling Three trial pits were excavated in the lagoon bund wall (Minet Tip) to the proposed excavation toe level of the level for the relocated bund wall. A layer of hydrocarbon impacted soil (clay) was encountered in all three trial pits at the base of the excavations such that the bund excavation will expose between 0.3m and 1.1m of the impacted material. The material above this layer comprised sandy gravelly clay or clayey sand and gravel with much deleterious material (metal, plastics, glass bottles, wood, cables, fibre glass boarding, ash etc). No perched water was encountered. T.Cole (FMC)/A.Curtis (CGL) discussed the potential impact of the contaminated material becoming exposed. A. Curtis advised the requirements for cover soils and/or other protection measures or reuse of the hydrocarbon impacted soils would be dependent on the concentrations and type of contaminants. 2. Railway Triangle Standing Water Machine dug trial slit trenches/holes were excavated in the railway triangle to attempt to identify the extent and source of standing/shallow water. The pits exposed an area of hardcore beneath the topsoil, on three layers of woven geotextile, in the central area. Water seepage was observed from beneath and on top of the hard core, between 0.3m and 0.7m bgl. This hardcore is the remains of a haul road constructed for the works. Based on the observations it is considered that the hardcore is hindering the seepage of water leaking from the canal, finding its way to Yeading Brook. FMC placing additional topsoil across the area to improve the aesthetics of the area.	
Sampling and/or testing undertaken or observed 1. Sampling of lagoon bund soil and hydrocarbon impacted soil from lagoon bund wall/Minet Tip trial pits (8 samples). Scheduled for chemical testing and asbestos ID screen, of which 3 hydrocarbon impacted soil samples also scheduled for TP CWG (soil and leachate).	
Other comments and observations (ecological concerns? Water observations? Anticipated issues?) FMC to consider reducing the dig level of lagoon bund wall to limit the excavation of hydrocarbon impacted material.	
Correspondence requested by FMC/CGL T.Cole (FMC) requested A. Curtis (CGL) to submit updated costs for site works today. To include attendance and sampling/ testing/review and reporting of results. To be submitted to FMC for approval.	

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Correspondence received from FMC

T. Cole (FMC) email on 11/07/19 requested site attendance by A. Curtis (CGL) to provide watching brief next week w/c 15/07/19 for lagoon bund relocation. A. Curtis email on 12/07/19 confirmed CGL costs/fees for site works, testing and reporting, and for site attendance w/c 15/07/19.

Summary photos



Photo 1. TP1 Minet Tip/Lagoon Bund Wall



Photo 2 TP2 Minet Tip/Lagoon Bund Wall



Photo 3 TP3 Minet Tip/Lagoon Bund Wall



Photo 4 Deleterious material riddled from Minet Tip/Lagoon Bund Wall



Photo 5 Hydrocarbon impacted soil in Minet Tip/Lagoon Bund Wall



Photo 6 Railway triangle slit trenches exposing hardcore and geotextile placed to form hardstanding during construction works.

APPENDIX I

Duty of Care Records