

Record of Site Visit No. 021

Site: Southall Western Access	Job No:	CG/28308
Client: FM Conway	Date: 25/08/2017	
Weather: Dry and sunny		
Site visit by: CRG	Project Manager: RNS	
On site: 07:15		
Off site: 16:30		
Visitors:		

UXO/ UXB specialist from MACC (Mark Smith) provided a detailed toolbox talk for ordnance discovery, the presentation showcased example ordnance and a suitable course of action to follow if discovered.

Recognise → Retreat → Report

UXO supervision is now a requirement for the continued excavation of the West GUC pile mat. It was agreed that the larger second device may have been buried in loose material in the pile mat base during profiling works rather than being transferred to the Lagoon holding. The loose material was carefully sieved through using an excavator and under the supervision of a UXO specialist and CGL Engineer. The device was eventually found in the base of the excavation and immediately examined. It was not considered to be a UXO/ UXB device, likely a cylindrical industrial filter/ heater with an emersion type component to each end. The outer casing was grilled and the cylinder was hollow. Having identified both devices, the lagoon area was deemed safe to work in.

Replacement parts were installed on the wheel wash cleaning station, there is still concern over the issue of runoff leaching into surface water drainage within the compound car park. Surface water was drained from 'Rail Triangle' onto natural ground north of the boundary, this area will be stabilised with imported 6F5 on Saturday.

Existing boreholes in Lagoon 1 were extended with additional standpipe and the existing stockpiles were reconfigured to create more space to receive more contaminated soil in completing the GUC pile mat excavation. Type B gravel was delivered and stockpile in Lagoon 2 ready to be installed in the drainage trench drainage pipe. A layer of approximately 0.4m 6F5 was installed to the lagoon base. Confirmation was received from i2 of receipt of environmental samples.

Surface rainwater was pumped from 'rail triangle' in preparation of fill works to complete the eastern section of the West GUC pile mat. Lab results identified no exceedances of contamination within the rainwater therefore this was drained directly onto the ground surface along the south boundary. CRG advised that the water was not pumped directly into the river as some fine sediment were drawn up clouding the water.

Summary Photos:	
	
UXO supervision as loose material was sieved in search of the second potential UXO device in the West GUC pile mat base.	Second potential UXO device identified by Environ was found and confirmed to be an industrial engine/ component, not UXO
	
Showing the electrical core to the end of device	Device was hollow with a metal outer grill
	
Position of engine/ component was found	Showing extent of completed West Brook pile mat
	
Lower eastern section of West GUC pile mat to be drained and filled with 6F5 crush	Surface rainwater in 'rail triangle' to be drained

	
Surface rainwater provided no visual or olfactory indication of contamination	Pump used to drain surface rainwater directly onto ground surface
	
Drainage polypipe installed to trench in Lagoon 2	Existing borehole height raised to accommodation stockpiled material
	
Layer of imported 6F5 crush added to the base of Lagoon 2	Lagoon 1 remained closed and inaccessible until second potential UXO device was found

Record of Site Visit No. 022

Site: Southall Western Access	Job No:	CG/28308
Client: FM Conway	Date: 29/08/2017	
Weather: Dry and sunny		
Site visit by: CRG	Project Manager: RNS	
On site: 07:40		
Off site: 15:45		
Visitors:		

Lagoon 1 – Each of the three separate stockpiles have been banked up over the weekend to accommodate more material, CRG added extension standpipe sections and casing to all three boreholes occupying the lagoon complex to accommodate raised ground and maintain borehole access.

Lagoon 2 – Works continued to complete the installation of the 6F5 base capping to approximately 0.4mbgl, rolled and compact. Two drainage extraction pipes were installed and linked into the trench drainage pipe. The trench was backfilled with Type B gravel encasing the slotted polypipe.

East Brook stockpile area – Imported 6F5 (Day Aggregates) was off loaded and stockpiled in this area; some was transferred to Lagoon 2 using a Moxy.

Laboratory results – Results for soil samples submitted to i2 Analytical on 24/08/17 were received today 29/08/17. A total of six soil samples were taken from the base of the excavation in areas where not all of the potentially contaminated soil was excavated fully, this included 'Blue Billy' spoil, brick gravel and dark cohesive or dark granular alluvial/ dredged material. The results were screened against the soil re-use criteria of which returned exceedances in Ammoniacal Nitrogen and Cadmium in the dark cohesive alluvial/ dredged material, Lead in the brick gravel and dark granular alluvial/ dredged material and Free Cyanide in all samples. Outside of the re-use criteria, there were also elevated concentrations of Organic Matter and hydrocarbons in the dark cohesive and granular alluvial/ dredged material. Visual and olfactory observations during the pile mat excavation highlighted moderate hydrocarbon odours in the dark cohesive and granular alluvial/ dredged material, CRG advised the separate stockpiling of the dark material. Based on the results, it would be prudent to cover this material to prevent rainwater ingress and the possible leaching out of hydrocarbons into the lagoon groundwater. Groundwater sampling can be undertaken from the lagoon drainage trench once a sufficient amount has accumulated to extract.

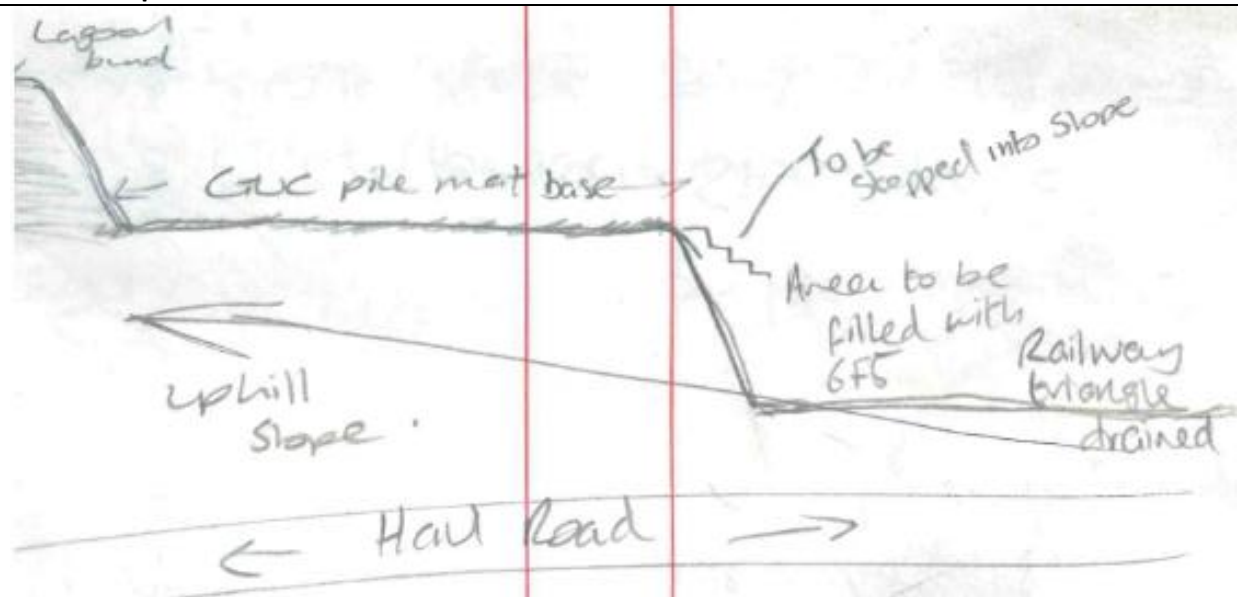
West GUC pile mat – The pile mat is positioned on a slope therefore only the western half was cut down to formation level. The lower eastern half downslope will be filled with 6F5 to raise the ground to formation level. CRG identified isolated areas of soft alluvium material along the east and southern margin of the pile excavation. The material was largely dark grey black silty fine grained sand with localised silty clay nodules, likely dredged material from GUC. In comparison to the firm gravelly clay exposed at base level, CBR values were lower in these sections. A double layer of geotextile was installed over the cut area of the pile mat base and in areas occupied by the softer ground, where CBR values were less than 5%, the geotextile was doubled up totalling four layers. The steep bank between the cut and fill sections of the pile mat was stepped east to west and sloped off towards the haul road to the north. This was undertaken to a high standard mitigating the risk of bank collapse or falling into the excavation. The banks at the deepest part of the excavation towards its north-eastern corner were profiled to 45 degrees or what was deemed practical as this was close to the base of the lagoon bund. The lagoon bund was also profiled to 45 degrees and fencing was erected to prevent pedestrian access. CRG is satisfied with the overall stability of the excavation and confined north-eastern section. The haul

road was scrapped and received a capping layer of 6F5 to accommodate mobilisation of the piling rig on to the pile mat location.

Wheel wash - The wheel wash was again fully operational although concern was raised about the amount of overspill still reaching surface drainage within the site compound. There was a notable oil sheen to the overspill of which was occupied the access road, pedestrian walkway and car park area.

Groundwater sampling – A full round of groundwater sampling was completed across six boreholes using a low flow pump; the seventh borehole was not tested as this has been removed following excavation works. Water samples were collected from site by i2 Analytical the same day and will be tested on a general suite on a standard turnaround.

West GUC pile mat



Summary photos



West GUC pile mat excavation completed in upper western section



West GUC pile mat excavation in lower eastern fill section

	
6F5 crush continues to be added to Lagoon 2 base	6F5 crush second layer added and rolled
	
Two drainage extraction points installed to Lagoon 2	Drainage extraction points added to trench pipe
	
Type B gravel fill added to drainage trench surrounding drainage pipe	6F5 crush rolled and compact in Lagoon 2
	
Existing boreholes and extraction pipes extended to accommodate stockpiled material	Overview looking southwest showing the completed eastern section of the West GUC pile mat

	
Overview showing the 10m wide bund alongside GUC	Overview of Lagoon 1 showing the contaminated soil stockpile (left) dark dredged material (back central) and clean material (right)
	
Overview of works to complete Lagoon 2	Overview of works to complete Lagoon 2
	
6F5 stockpile area east of Brook	6F5 imported and delivered to site
	
Isolated sections of soft dredged/ alluvium material at base of West GUC pile mat	Lower western section of West GUC pile mat to be filled up to base level

	
CBR plate testing undertaken in compound car park, haul road and West GUC pile mat base	CRG undertook groundwater sampling in each borehole using low flow technique
	
Type B gravel installed in Lagoon 2 trench burying drainage pipe and securing vertical extraction pipe	Geotextile added to base of west GUC pile mat, four layers added to sections with low CBR values
	
Bank between east and west sections is stepped	Lower fill section of West GCU pile mat stepped and sloped into haul road (left)

Record of Site Visit No. 023

Site: Southall Western Access	Job No: CG/28308
Client: FM Conway	Date: 30/08/2017
Weather: Overcast, cold and raining	
Site visit by: CRG	Project Manager: RNS
On site: 07:20	
Off site: 15:15	
Visitors:	

Imported material sampling – 6F5 bulk bags taken, this will be scheduled for environmental and geotechnical testing once a testing frequency and criteria is established with the intension of reusing the material within the final design.

Crane lift - Four new accommodation units installed today, a temporal walkway was put in place along the back of the wheel wash to divert pedestrians away from the lift area. Parking was moved to Pump Lane haul road keeping the compound car park clear.

GUC pile mat – Western half fill going in (6F5) approximately 0.3mbgl first layer, fill area will be raised to formation level. Geotextile membrane placed in cut eastern half increased from two to four layers in areas of (soft) dark cohesive and loose granular soil where CBR values were less than 5%.

GUC bank stability - Near miss reported raising concern of the stability of part of the GUC pile mat bank walls; works were stopped in the eastern end of the excavation and fenced off whilst inspections were undertaken. CRG inspected the condition of the bank wall; the south bank (running parallel to GUC) was profiled at 45 degrees with secure herras fencing along the top; the north bank was partially stepped as far as feasible as the base of the lagoon bund was positioned immediately northeast; a small section to the extreme eastern corner had near vertical walls though this area was fenced off and not accessible. In the interest of safety, the best course of action would be to profile the eastern corner to 45 degrees or step the bank walls including the lagoon bund, this is not however practical given the proximity of the lagoon bund. Profiling will reduce the dimensions of the pile mat and stepping works are likely to undercut the lagoon bund. The bank walls were largely comprised of (firm) clay with no visual indication of slumping, tension cracking or fallen loose material. In current condition, CRG is satisfied that the bank walls are generally stable however require daily inspection and interim inspections if external conditions change. This includes weather conditions, temperature variation and external works. CRG observed a brick gravel area to the eastern corner, the granular material appeared to be stable however this will need to be closely monitored, particularly when works to roll and compact the fill are undertaken as vibrations can potentially destabilise the granular material.

Water sampling – Only six out of the seven boreholes were identified for groundwater sampling, a single borehole was destroyed following excavation works. A total of four samples (EW1 to EW4) were taken as groundwater was not encountered in the remaining two boreholes. Water was extracted using a low flow pump technique to avoid sediment disturbance. Approximately 30 litres was purged from each borehole with samples taken from the pump outflow directly.

CBR - Completed in compound car park (for crane lift), haul road and GUC pile mat (for piling rig mobilisation/ operation).

Lagoon 1 – Stockpiles have been clearly numbered and a series of invasive plant species signage has been installed along perimeter fencing.

Lagoon 2 – Completed, CRG extended the height of borehole to accommodate incoming material.

Summary photos	

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	31/08/2017 SVR24	VISIT BY:	CRG
WEATHER:			
Time	Description		
All day	Sunny day, clear spells with light winds		

Site operations

Work in hand

- 6F5 fill to cut section of WGUCPM
- Excavation of EYBPM started
- Haul road improvement works, surface slurry scrape and 6F5 layer added
- Site accommodation blocks to be completed

Observations

1) Excavation of EYBPM began, arisings were clean and natural material with no visual or olfactory indication of contamination, this was stockpiled in the clean stockpile to the right of Lagoon 1.

2) All excavation works in WGUCPM are now CGL and UXO supervised following the UXB discovery in the WGUCPM south bank. 6F5 fill added to cut eastern half. A total of four geotextile layer were added over areas where soft clay/dredged alluvial material was encountered at formation level to improve load strength. Western half of pile mat was stepped into the descending slope and haul road, this will be filled with 6F5 to meet formation level of the eastern half. The extreme northeast of the pile mat was fenced off preventing all access until the lagoon bund was better stabilised, FM Conway awaiting permission to dig into 10m exclusion zone of the canal.

3) WGUCPM: South bank profiled to 45°, North bank partially stepped towards steepened northeast corner. The bank walls to the extreme northeast corner were over-steepened as they cut into the lagoon bund, there was limited pliability to profile or step the slope without undercutting the lagoon bund or intercepting the boundaries of the pile matt. In the short-term the northeast bank appeared stable with no visual indication of instability such as tension cracking, deposits of fallen debris or slumping.

4) Stockpiles outside the lagoon complex and lagoon stockpiles were labelled, 1= Seeded topsoil, 2= Timber, 3= Seeded topsoil, 4= Contaminated soil, 5= Dark material and 6/ 7= Clean soil. Invasive species signage was placed on boundary fencing in areas occupied by invasive plants.

5) Possible minor fuel spill in EGUCPM, not enough to sample, spill kit used to clean up free product and surface soil removed.

Sampling and/or testing undertaken or observed (results requested? Locations marked on attached plan?)

Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

CRG raised concern of vibration of rollers operating in the WGUCPM and stability of the northeast bank, particularly with the presence of a granular brick gravelled section.

No pedestrian access to the WGUCPM edge along the north and east banks

Correspondence requested by FMC

CRG to access the stability of the WGUCPM northeast bank on a daily basis before any works are undertaken within the excavation, CRG also requested that banks are additionally check during external changes such as heavy rainfall, temperature variation or loading.

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall	JOB NO:	CG/28308
Date and time:	01/09/17 SVR25 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Overcast with rain		

Site operations

Work in hand	Excavation of WGUC to create pile mat. Infilling of 6F5 to create WGUC pile mat. Excavation at EYB for pile mat construction.
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Observations

- 1) All topsoil had been cleared from area of EYB pile mat. Excavation of the alluvial material within pile mat footprint had started.
- 2) CGL monitored the re-profiled lagoon bund slope profile, no deterioration of cut face was noted.
- 3) Continued excavation of the footprint of WGUC pile mat and continued backfilling of the pile mat with 6F5.

Sampling and/or testing undertaken or observed (results requested? Locations marked on attached plan?)

Site Observation Report Form



Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

Lagoon 1 southern lagoon wall was noted to have spilled out of the lagoon. Need to be scrapped back and brought into lagoon.

Correspondence requested by FMC

Correspondence received from FMC

Site Observation Report Form



SITE:	Southall	JOB NO:	CG/28308
Date and time:	04/09/17 SVR26 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Overcast with rain		

Site operations

Work in hand

Infilling of 6F5 to create WGUC pile mat.
Excavation at EYB for pile mat construction.

Observations

- 1) Ongoing excavation at location of proposed EYB pile mat. Material appears to be alluvial clays and gravels overlying London Clay Formation. No potential contamination noted with natural material. Soil samples were obtained from alluvial material present
- 2) CGL monitored the re-profiled lagoon bund slope profile, no deterioration of cut face was noted.

Sampling and/or testing undertaken or observed (results requested? Locations marked on attached plan?)

Two soil samples were taken from alluvial material within EYBPM during excavation to formation level of the pile mat.

Site Observation Report Form



Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

Correspondence requested by FMC

Correspondence received from FMC

Record of Site Visit No. 027

Site: Southall Western Access	Job No:	CG/28308
Client: FM Conway	Date: 05/09/2017	
Weather: Overcast, mild and dry, drizzle pm		
Site visit by: CRG	Project Manager: RNS	
On site: 09:45hrs		
Off site: 17:00hrs		
Visitors:		

Pile Mat 1 (river west platform) – Class 6F2 filling complete. Crane standing.

Pile Mate 2 (River east platform) – Excavation of alluvial clay to formation approx. 1.2m bgl. Formation material comprises light brown/grey or orange medium to coarse sand and gravel with patches (1m x 2m) of firm/stiff orange/brown and grey clay. Laying geotextile 700R across formation. Excavated material to stockpile in west lagoon.

Pile Mat 3 (canal west platform) – Class 6F5 importing and filling ongoing. Formation material not seen. 4 layers of geotextile 700R have been placed on top of each other (2 more than required by specification), across full 12m width in eastern half adjacent to canal. Plus 1 layer of Lotrak 100m above geotextile across approx. 8m width at southern end.

Enviro query - potential risk to Controlled Waters

ALC/Trevor discussion. Trevor (Conway) has had a query raised by Enviro who are concerned that with the removal of the mound of Made Ground and placement of the permeable pile mat, rainwater can infiltrate through the mat into the underlying black clay, which may pose a risk of contamination to groundwater and the controlled waters of the canal.

Trevor (Conway) has asked CGL to put together a response to Environ's query. The risk would be reduced if it can be shown there is no pathway for potentially contaminated water to migrate to the canal waters i.e. the bridge abutment will effectively prevent infiltration, or if the sides of the excavation were formed of low permeability material (clay), or if concentrations can be shown to be acceptably low. A visual inspection today indicates the upper sides of the slope are not generally cohesive and comprise variable Made Ground consisting of brown/grey/black slightly clayey gravelly sand with some cobbles of brick and concrete, plastic, rope, metal. No visible asbestos containing material was identified in the excavation.

Excavation between the pile mat and canal is to be undertaken tomorrow to make room for the pile rig, CGL site engineer to inspect excavation.

Actions:-

- 1.) CGL to update of pile risk assessment for the likely inclusion of black clay in the pile arisings.
- 2.) Conway have requested CGL provide a comment on whether or not the potential risk of contamination to controlled waters will be an issue.

Lagoon bank stability – Bank inspected. No signs of major instability i.e. tension cracks, slumping. Some minor undercutting and ravelling at crest as previously noted.

Material sampling – none taken.

Water sampling – None taken.

Testing – CRG confirmed two samples taken from black clay in Pile Mat 3 excavation have been tested and the results indicate the material will not be suitable for reuse. Awaiting WAC results, due on 12th September.

Summary photos



Pile mat 2 (river east platform) excavation and placement of geotextile



Pile mat 2 (river east platform) – formation level



Pile mat 3 excavation – granular Made Ground



Pile mat 3 – placement of Class 6F2 on geotextile and lotrak geogrid



Lagoon bund crest – no signs of major instability



Pile mat 1 complete.

Site Observation Report Form



SITE:	Southall	JOB NO:	CG/28308
Date and time:	06/09/017 SVR28 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Overcast with rain		

Site operations

Work in hand

Topsoil stockpile at West & East Yeading Brook and being moved to Lagoon 2.
Construction of East Yeading Brooke Pile mat.
Continued construction of Pile mat build up to West GUC pile mat.

Observations

- 1) Ongoing movement of topsoil stockpiles into Lagoon 2. Wood is being separated from topsoil and stockpiled alongside.
- 2) Ongoing construction of East Yeading Brook Pile mat and stockpiling of 6F5 on completed section of pile mat to allow for further excavation of southern end of pile mat footprint.
- 3) Environ onsite drilling two groundwater monitoring wells between west GUC pile mat and canal to monitor potential migration on contaminants from hydrocarbon impacted clays beneath pile mat, into canal.

Site Observation Report Form



Sampling and/or testing undertaken or observed (results requested? Locations marked on attached plan?)

Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

Correspondence requested by FMC

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form

SITE:	Southall	JOB NO:	CG/28308
Date and time:	07/09/017 SVR29 Am to PM	VISIT BY:	ALC
WEATHER:			
Time	Description		
09:00-17:30	Overcast, sunny intervals, dry		

Site operations**Work in hand**

Topsoil stockpile at West & East Yeading Brook and being moved to Lagoon 2.
Construction of East Yeading Brooke Pile mat.
Continued construction of Pile mat build up to West GUC pile mat.

Observations

- 1) Ongoing movement of topsoil stockpiles into Lagoon 2. Wood is being separated from topsoil and stockpiled alongside.
- 2) Ongoing construction of East Yeading Brook Pile mat and stockpiling of 6F5 on completed section of pile mat to allow for further excavation of southern end of pile mat footprint.
- 3) GUC west concrete plug between box and canal has been plugged to prevent ingress of water from canal into excavation where contaminated water is currently standing.

Site Observation Report Form



Sampling and/or testing undertaken or observed (results requested? Locations marked on attached plan?)

5 geoenvironmental samples taken from placed 6F5:-

West YB Pile Mat 1

West YB Pile Mat 1

East GUC Pile Mat 3

Ramp between haul road and East GUC Pile Mat 3 (canal mound)

Haul Road between East GUC Pile Mat 3 and East GUC excavation

Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

Still some water seepage from canal around concrete GUC west plug into excavation, This water has been tested and has exceedances of heavy metal concentrations and will need to be managed as contaminated water.

Correspondence requested by FMC

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form

SITE:	Southall	JOB NO:	CG/28308
Date and time:	08/09/17 SVR30 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Overcast with rain		

Site operations**Work in hand**

Set up of piling rig at West Yeading Brook Pile mat.
Topsoil stockpile at West & East Yeading Brook and being moved to Lagoon 2.
Construction of East Yeading Brooke Pile mat.
Continued construction of Pile mat build up to West GUC pile mat.

Observations

- 1) Ongoing movement of topsoil stockpiles into Lagoon 2. Wood is being separated from topsoil and stockpiled alongside.
- 2) Ongoing construction of East Yeading Brook Pile mat and stockpiling of 6F5 on completed section of pile mat to allow for further excavation of southern end of pile mat footprint.

Site Observation Report Form



Sampling and/or testing undertaken or observed (results requested? Locations marked on attached plan?)

6 samples of 6F5 were taken. Two from the drainage layer across Lagoon 1 (ES1 & ES2), two from drainage layer across Lagoon 2 (ES1 & ES2) and two from East Yeading Brook Pile mat (ES1 & ES2). These samples were sent for testing on 11/09/2017.

Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

Hydrocarbon sheen was noted running across Haul Road from bunded diesel tanker. Sheen was noted quickly and FM Conway alerted.

Correspondence requested by FMC

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form

SITE:	Southall	JOB NO:	CG/28308
Date and time:	11/09/17 SVR31 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Occasional rain turning to sun by midday		

Site operations**Work in hand**

Pilling at West Yeading Brook Pile Mat
Stockpiling of 6F5 at/and ongoing construction of East Yeading Brook Pile mat.

Observations

- 1) CGL engineer was inducted on main Southall site (Berkleys).
- 2) Pile arisings from West Yeading Brook pile mat consist of Alluvial material and London Clay. Natural material is mixed with concrete from piles when clearing the area. This cannot be avoided due to nature of works. The material is being stockpiled beside the clean Alluvial material from the East Yeading Brook pile mat excavation (near stockpile 7). The pile arisings have been shown to be coated with concrete dust and interspersed with concrete cobbles. FM Conway are going to sort the pile to remove the concrete cobbles and leave clay.
- 3) 11x700mm piles were completed by end of shift (late finish).

Sampling and/or testing undertaken or observed (results requested? Locations marked on attached plan?)

Site Observation Report Form



Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

Correspondence requested by FMC

Correspondence received from FMC

Site Observation Report Form



SITE:	Southall	JOB NO:	CG/28308
Date and time:	12/09/017 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Sun and clear skies all day		

Site operations

Work in hand

Pilling at West Yeading Brook Pile Mat
Stockpiling of pile arisings in Lagoon 1

Observations

- 1) Continued piling at West Yeading Brook. 11 x 700mm piles completed by start of the shift. Remaining 5x 900mm piles left to install during shift.
- 2) FM Conway were concerned with pile concrete/wash out overflowing bath onto pile mat. Wash out solidified overnight and was picked up and deposited within lagoon 1. Pile mat material beneath wash out was un-impacted and the risk posed by washout to controlled waters is considered to be negligible as the wash out is too viscous to flow through the pile mat and solidifies quickly at surface of mat.
- 3) Berkleys were concerned with storage of pile auger in ground overnight in case new contamination pathways were created. CGL and FM Conways believe there is negligible risk as ground is not contaminated and augers are clean. Environ agreed with this assessment.

Sampling and/or testing undertaken or observed (results requested? Locations marked on attached plan?)

Three samples of the pile arisings were taken from stockpile. WYDPM Arisings ES1-ES3. Sent for testing on 12/09/2017.

Site Observation Report Form



Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

Stockpile 6 (hazardous) is touching/in close proximity to pile arisings. FM Conway told to separate the two stockpiles and not allow mixing of material.

Correspondence requested by FMC

Waste classification of stockpile 5 and 6 (hazardous stockpile) required asap.

Correspondence received from FMC

Site Observation Report Form



SITE:	Southall	JOB NO:	CG/28308
Date and time:	13/09/017 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Sun with occasional showers		

Site operations

Work in hand

Pilling at West Yeading Brook Pile Mat
 Stockpiling of pile arisings in Lagoon 1
 Groundwater monitoring round – 1st of weekly rounds during piling works

Observations

- 1) Continued piling at West Yeading Brook. Remaining 5x 900mm piles left to install during shift.
- 2) Mixing of material in stockpile 6 and the pile horizons was rectified by separating the two stockpiles with plant on site. BH3A in this area was raised by another metre to allow for additional arisings to be stockpiled.
- 3) Groundwater sampling was undertaken BH1A and BH3A were sampled however, remainder of CGL boreholes were not due to discovery of potential UXO close to BH1A after sampling.
- 4) Potential UXO was noticed by CGL engineer following sampling of BH1A whilst moving to next location. Potential UXO was 20cm long and 5cm wide, milk bottle shaped with a rounded tip and flat bottom. CGL engineer contacted CRG (who discovered previous UXO onsite), CRG believed object is same as he previously encountered. FM Conway (Brian & Trevor Cole) was made aware immediately following discovery (approx. 1:30pm). Upon their confirmation that object was a potential risk a 100m exclusion zone was established around the area. Police arrived on site and arranged for bomb disposal to visit site same day.

Site Observation Report Form



Sampling and/or testing undertaken or observed (results requested? Locations marked on attached plan?)

NA – groundwater sampling was stopped due to presence of UXO. Groundwater sampling to restart tomorrow (14/09/2017).

Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

Correspondence requested by FMC

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall	JOB NO:	CG/28308
Date and time:	14/09/017 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Sun and clear skies		

Site operations

Work in hand

Moving piling rig from WYBPM to WGUC pile mat
 Stockpiling of pile arisings in Lagoon 1
 Stockpiling of topsoil from floor alleviation scheme into Lagoon 2
 Groundwater monitoring round – 1st of weekly rounds (re-started following interruption to groundwater monitoring on 13/09/17.
 Re-profiling cut face at WGUC pile mat.

Observations

- 1) Piling rig was moved to west GUC pile mat. Piling rig was ready to proceed with piling by end of shift.
- 2) Re-profiling of cut face at west GUC pile mat was halted due to presence of ACMs within excavated material. FM Conway's method statement was updated to allow for damping down of arisings and to remove operators from area of works. Only two machine drivers were present when handling material. ACM impacted material was added to Lagoon 1 between the contaminated stockpile (4) and the hydrocarbon impacted clay material (stockpile 5) from west GUC pile mat excavation. The material is to be covered with visqueen sheeting to mitigate against dust generation and cross contamination of other stockpiles.

Site Observation Report Form



Sampling and/or testing undertaken or observed (results requested? Locations marked on attached plan?)

1st round of weekly groundwater sampling during piling works was undertaken. Six samples were obtained and sent to I2 Analytical for testing.

Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

Asbestos impacted material has not been covered with visqueen.

Correspondence requested by FMC

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall	JOB NO:	CG/28308
Date and time:	15/09/017 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Sun and clear skies		

Site operations

Work in hand

Piling began on west GUC pile mat.
 Stockpiling of pile arisings in Lagoon 1
 Stockpiling of alluvial soils from flood alleviation scheme into Lagoon 1
 Re-profiling and mixing of stockpile 5 and 6 (hydrocarbon impacted material) to create more space within Lagoon 1.

Observations

- 1) Piling works began at west GUC pile mat. Piling contractor was asked to separate arisings to minimise mixing of potentially hydrocarbon impacted clays and London Clay. This approach was not suitable due to working area constraints around rig. All material excavated from west GUC piles was stockpiled separately from other stockpiles on site.
- 2) Alluvial material excavated from River Diversion was being added to clean stockpile within Lagoon 1. Whilst not testing was undertaken on this material prior to stockpiling this approach is considered to represent a low risk to current stockpiles of re-useable material.
- 3) CGL raised concerns that there was not enough space within the two lagoons in order to accommodate the material being excavated on site. FM Conway have sought agreement from Berkleys in order to stockpile alluvial material from River Diversion, along Haul Road close to Yeading Brook. CGL recommended that visqueen sheeting be placed before stockpiling commenced in order to mitigate against cross contamination.
- 4) Whilst stockpiles 5 and 6 were being amalgamated into one stockpile the lagoon's impermeable liner was ripped in several locations. These areas have to be repaired prior to infilling at the locations in order to ensure design of lagoon is not compromised.

Site Observation Report Form



Sampling and/or testing undertaken or observed (results requested? Locations marked on attached plan?)

Three soil samples were obtained from west GUC pile arisings (WGUC Arisings) with a further three samples being obtained from the alluvial material associated with the River Diversion works (RD). The samples were sent for testing at I2 Analytical.

Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

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Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	18/09/2017 Am to PM	VISIT BY:	CRG
WEATHER:			
Time	Description		
	Cold, sunny with cloudy intervals and some isolated heavy showers		

Site operations	
Work in hand	Piling works continue in WGUC pile mat. Excavation works for River Crane diversion underway with clean arising's stockpiled in East Brook pile mat. WGUC pile arising's stockpiled in Lagoon 1 (contaminated stockpile) Clearing and exposure of torn lagoon membrane in preparation for repair works
Observations	
1) Re-profiling of cut face at west GUC pile mat completed under the supervision of an asbestos specialist hand picking loose fragments. 2) ACM impacted material was added to Lagoon 1 between the contaminated (stockpile 4) and the hydrocarbon impacted clay material (stockpile 5) from the west GUC pile mat excavation. The material was covered with visqueen sheeting to mitigate against dust generation and cross contamination to other stockpiles. 3) Four soil samples taken from East Grand Union Canal (EGUC) pile arising's (ES1 to ES4) and submitted for laboratory analysis (EGUC arising's) against the re-use criteria. Arising's were comprised of soft dark green grey sandy clay with nodules of silty clay. OR Soft light orange brown sandy gravelly clay. Gravel is angular to well rounded, fine to medium of flint. Occasional subangular cobbles of flint and rare sections of concrete on surface. 4) Two river silt samples taken (ES5 and ES6) from River Crane channel bed (RCS) to be screened against the re-use criteria to establish if dredged material can be re-used. River Crane silt was a soft glossy black slightly gravelly silt with organic matter. Gravel is subangular to subrounded, fine to medium of flint. Strong organic odour and occasional partings of plastic refuse. Plant matter partly decomposed. 5) Two brook silt samples taken (ES7 and ES8) from Yeading Brook channel bed (YBS) to be screened against the re-use criteria to establish if dredged material can be re-used. Material comprised a loose light brown silty fine to medium sandy gravel. Gravel is subangular to subrounded, fine to medium of flint. 6) Coolant liquid spill from cement pump in WGUC, a pale green viscous liquid with no smell. A	

'nappy' was placed underneath however on a slope therefore liquid was over spilling onto the haul road and north bank edge. This was cleaned up using a spill kit and piling workers were advised that any further spills must be dealt with immediately to avoid potential GW contamination in the piling area.

- 7) Arisings from the river diversion were stockpiled temporally in the western Brook pile mat. These were identified as clean natural material largely comprised of a soft orange brown sandy gravelly clay or sand gravel. Gravel is fine to coarse, occasionally cobble, of flint. Sand was medium to coarse.
- 8) Sand bags have been placed along the haul road edge in the wheel wash area to prevent contained water reaching surface drainage in the compound area.
- 9) Stockpile was scrapped back in Lagoon 1 to expose torn membrane and to provide access for repair. This area has been fenced off as cutting is fairly steep, this will need to be stepped or profiled when work is undertaken in the area to repair the torn membrane.

Sampling and/or testing undertaken or observed

East Grand Union Canal piling arising's sampled (ES1 to ES4)

River Crane silt sampled from channel base (ES5 and ES6)

Yeading Brook silt sampled from channel base (ES7 and ES8)

Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

Advised that accumulated rainwater is drained from unused lagoon trenches before it overflows onto haul road and potentially become contaminated. In its current state, this is just rainwater that can be pumped away.

Possible toolbox talk to piling contractor Expanded to be more responsive to chemical spills in the pile mat areas, keeping nappies replenished when saturated, level and to stop using machinery that continues to leak.

Cutting in lagoon stockpile to expose torn membrane are vertical and will need to be profiled/ stepped when repair works are undertaken.

Correspondence requested by FMC

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Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	19/09/2017 Am to PM	VISIT BY:	CRG
WEATHER:			
Time	Description		
	Sun, clear skies and light winds		

Site operations

Work in hand	*Piling contractor Expanded to clean piling area until noon before continuing piling of the West GUC, arising's to contaminated stockpile in lagoon 1. *River diversion main channel excavated *Asbestos specialist to handpick loose fragments from asbestos contaminated stockpile in lagoon 1 *i2 Laboratory collection (am) for yesterday's soil samples *Stockpile management in lagoon 1
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Observations

- 1) Pile arising's were placed along the south face of the contaminated stockpile and comprised of a sandy clay or sandy flint gravel. There were no visual or olfactory signs of contamination in the natural material.
- 2) Emphasis on the importance of using nappies under pile machinery during morning brief. Yesterday's fluid spill was cleared including a surface soil scrape (Into contaminated stockpile in Lagoon 1)
- 3) Asbestos specialist collected a bag of cement board fragments from Lagoon 1 ACM stockpile, area was excluded from other works whilst asbestos removal was undertaken.
- 4) Area where lagoon membrane has been torn was cleared to allow access for Butek. Cutting still has over steepened vertical edges.
- 5) River diversion excavation completed up to haul road, all arising's to West Yeading Brook pile mat along western side.

Sampling and/or testing undertaken or observed

No samples taken today but soil samples taken yesterday were collected from i2 Laboratory.

Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

- 1) Cutting in lagoon for Butek remains too steep and needs to be profiled or stepped to provide a safe working area whilst membrane repairs are undertaken.
- 2) CGL requested historical and current CAD files of stockpile volume and positioning to add weekly sampling locations to.
- 3)

Correspondence requested by FMC

FMC request that CGL implement and use a weekly timesheet.

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	20/09/2017 Am to PM	VISIT BY:	CRG
WEATHER:			
Time	Description		
	Sunny with cloudy intervals		

Site operations

Work in hand	Groundwater sampling of CGL boreholes Surface water sampling of the Yeading Brook and interceptor discharge point Completion of piling works to West GUC Profiling works to northwest haul road to bailey bridge
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Observations

- 1) West GUC piling completed, dismantling of piling rig and equipment ready for mobilisation
- 2) Groundwater sampling of all CGL boreholes undertaken using low flow pump, samples taken from five of the seven boreholes. BH1B was dry and BH2B had insufficient water to sample.
- 3) Three surface water samples were taken from Yeading Brook in an area upstream of the site, midstream within the site and downstream of the site boundary. Surface water samples were also taken from the compound surface drainage discharge point.
- 4) All water samples submitted to i2 to be collected the following morning.

Sampling and/or testing undertaken or observed

Sampling of groundwater in CGL boreholes, surface water of Yeading Brook and compound surface water discharge point.

Other comments and observations (ecological concerns? Water observations? Anticipated issues?)

Received print out of CAD Figure of lagoon complex stockpiles, requested email CAD files to allow CGL to mark up where weekly samples have been taken from.

Correspondence requested by FMC

Request to complete weekly timesheet to be approved by Bryan

Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	21/09/2017 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Sun and clear skies		

Site operations

Work in hand	Enabling works and construction of crane platform for installation of River Crane Bailey Bridge (north of Pump Lane). Excavations of wing wall at WYBPM to enable pile cropping. Completion of piling works at WGUCPM. Moving of piling rig from WGUCPM to EYBPM. Piling at EGUCPM.
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Observations

- 1) CGL discussion with Meslec regarding provision of current chemical test data for the hydrocarbon impacted material within stockpiles 5&6 (now merged) in Lagoon 1. Chemical data provided to Michael, director of Meslec.
- 2) Discussion ED (FM Conway) regarding approval of excavation side walls at WYBPM when excavating for pile cap installation.
- 3) CGL requested CAD files from FM Conway's surveyor to enable provision of sample location plan for work to date.
- 4) CGL visited EGUCPM to confirm methodology used in construction of pile mat and the extension of it towards the canal tow path.

Sampling and/or testing undertaken or observed