

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

- 1) Limited space within the Lagoons for stockpiling site won material. It is recommended that FM Conway look at options for removal of non-reusable material (stockpile 4, 5 and 6).
- 2) CGL believes no impermeable liner was placed beneath River Diversion stockpile beside and on WYBPM as per agreement with Berkley Homes.

Correspondence requested by FMC

- 1) CGL approval of canal excavation side walls methodology and WYBPM excavation side walls (for formation of pile cap) methodology.

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:	CRG
WEATHER:			
Time	Description		
	Sunny day with clear skies		

Site operations

Work in hand	Installation of foundation pads for River Crane Bailey Bridge (north of Pump Lane). Excavations of wing wall at WYBPM and pile cropping. Mobilisation of piling rig and crane from WGUCPM to EYBPM. Piling at EGUCPM. Works on existing haul road to accommodation crane mobilisation. Setting out works to mark out river diversion channel.
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Observations

- 1) Discussion with ED (FM Conway) regarding approval of Bailey Bridge works as compact 6F5 foundation pads very close to the River Crane. On the west bank, the 6F5 was installed 1.5m from the River Crane edge and on the east bank 6F5 was placed behind timber battening on the river edge. The battening failed during compaction and 6F5 was falling directly into the river channel. CRG raised concern that imported 6F5 that has not yet been environmentally screened could directly contaminate the water course. The granular material also underpins the concrete foundations of the Bailey bridge and at risk of washout during high flow events such as when the river responds to adverse winter rainfall. There were a number of flood plains and boggy areas further upstream indicating that the current river level is not static. The failed battening was removed and the east pad was set-back 1m, profiled at 45 degrees and covered in a plastic waterproof membrane to provide some armouring from entrainment.
- 2) Excavated on west bank to construct new haul road down to the new Bailey Bridge, banks became over steepened and works stopped whilst bank edges were profiled and made safe.
- 3) CGL requested CAD files from FM Conway's surveyor to enable provision of sample location plan for work to date.
- 4) Excavation of wing wall at WYBPM limited as haul road bank becoming over steepened, arisings were clean natural ground and stockpiled along western edge.
- 5) EYBPM mobilisation of piling rig and equipment, link haul road was constructed using layer of geotextile and 6F5 to allow crane mobilisation. Piling works started on EYBPM in the afternoon, arisings were clean and natural ground and stockpiled in Lagoon 1 on clean stockpile.

Sampling and/or testing undertaken or observed

Schedule sent to i2 for groundwater and surface water samples

Print out of stockpile types and volume provided by surveyors

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

1) Limited space within the Lagoons for stockpiling site won material. It is recommended that FM Conway look at options for removal of non-reusable material (stockpile 4, 5 and 6).

2) Disused lagoon section overflowing with surface water and beginning to leach onto haul road, this should be drained to avoid potential contamination of the water.

Correspondence requested by FMC

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form

SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	26/09/2017 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Sunny day with overcast skies		

Site operations

Work in hand	Installation of foundation pads for River Crane Bailey Bridge (north of Pump Lane). Excavations of wing wall at WYBPM and pile cropping. Mobilisation of piling rig and crane from WGUCPM to EYBPM. Piling at EGUCPM. Cleaning and enabling works for lagoon membrane along Haul Road.
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Observations

- 1) Works on site are progressing well however, a number of stockpiles are present outside of the Lagoons. The material in these stockpiles are related to natural Alluvial deposits removed from north of Pump Lane (Bailey Bridge) and WYBPM Cropping works. Limited space is present within the lagoons and CGL has ordered additional well installation pipe to raise three boreholes inside lagoons.
- 2) Discussion with Derek (FM Conway) regarding testing of two stockpiles on site for potential reuse on main Southall Waterside site. Stockpiles are located beside WYBPM (from pile cropping) and north of Pump Lane (enabling works for River Crane Bailey Bridge). Derek and CGL also discussed upcoming River Crane diversion works in regards to chemical and geotechnical suitability of site won materials for backfill of abandoned River Crane channel.

Sampling and/or testing undertaken or observed

Four samples were taken from WYBPM Cropping material stockpiled at WYBPM beside the excavated wing walls.

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

- 1) CGL informed Brian (FM Conway) that the south face of Lagoon 1 (where membrane is torn) should be cleaned prior to Butek return to site to ensure no other damage is present, in addition to currently visible damages.
- 2) Pondered water within southern section of Lagoon 2 is suitable for use as damping down on site as no material has previously been stored in this area and what is a result of rainfall only.

Correspondence requested by FMC

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Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	27/09/2017 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Sunny day with overcast skies		

Site operations

Work in hand	Installation of foundation pads for River Crane Bailey Bridge (north of Pump Lane). Excavations of wing wall at WGUCPM De-mob of piling rig and crane from EYBPM. Piling at EGUCPM. Cleaning and enabling works for lagoon membrane along Haul Road. CGL surface water sampling and stockpile sampling.
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Observations

1) Minimal space is available within the lagoons for stockpiling of material to be excavated from WGUCPM. Its anticipated that additional hydrocarbon impacted clays and gravels will be excavated along with 'clean' clays and gravels. It would be best to stockpile the hydrocarbon impacted material within stockpile 5 and 6 in Lagoon 1.

1. There have been preliminary discussions with regards to stockpiling material on the southern half of Lagoon 2.

2. The drainage layer should be added to this section before material is stockpiled. Furthermore, the natural fall of the lagoon should be taken into consideration so that no leachate drains onto the Haul Road. CGL recommends that should this space be required, before the membrane and liner are joined (Lagoon 2), that 'clean' natural arisings be stockpiled here.

Sampling and/or testing undertaken or observed

A further six samples were obtained from WYBPM Cropping stockpile, bringing the total number up to 10. Six samples were also taken from the stockpile north of Pump Lane, associated with River Crane Bailey Bridge enabling works.

One sample of the ponded water within Railway Triangle was obtained. Three samples of surface water from the Yeading Brook were taken (upstream of site, middle and downstream of the site).

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

1) Ponded water within Railway Triangle was being pumped into land between Railway Triangle and GUC. Pumping works were halted and CGL gathered surface water samples for laboratory testing to determine if contamination is present within water. Previous samples were taken from this water (circa 2 months prior) however, the samples were taken for disposal options and not to assess risk relating to pumping to ground. CGL to aid Brian (FM Conway) with tool box talk relating to best practise when handling solids and liquid on site when working around sensitive receptors.

Correspondence requested by FMC

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Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	29/09/2017 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Overcast with occasional showers		

Site operations

Work in hand	Installation of foundation pads for River Crane Bailey Bridge (north of Pump Lane). Excavations of wing wall at WGUCPM. De-mob of piling rig and crane from EYBPM. Piling at EGUCPM. CGL groundwater sampling. Enabling works for wheel wash re-circulation. Enabling works for installation of coffer dam at River Crane prior to River Diversion completion. CGL toolbox talk regarding contamination on site and best practise to protect human health and controlled waters.
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Observations

- 1) Works progressing well, observations covered in other sections.
- 2) CGL to be on site full time during River Diversion works starting w/c 02/10/17.

Sampling and/or testing undertaken or observed

Five groundwater samples were taken from the CGL installed monitoring wells. Groundwater could not be sampled from BH3A as the depth to groundwater was too great for low flow sampling equipment and the pipe too bent for bailing. CRG to attempt to sample BH3A w/c 02/10/17.

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

- 1) Excavated Alluvial material from WYBPM Cropping works was backfilled against southern wing wall within WYBPM to provide stabilising force when tracking piling rig across Haul Road. Material was removed today and placed to the east of the EYBPM. The material has not been placed on a liner and is currently being stored in an area where seeded topsoil was previously stockpiled. Whilst this material was excavated from a natural source (likely re-useable) CGL recommends that this material not be added to the re-usable stockpiles on site without further testing.
- 2) Car Park and road area are becoming laden with mud. FM Conway should look to clean hardstanding more frequently entering winter months.
- 3) FM Conway should look to re-introduce boot wash east of Yeading Brook so that entrained mud is not 'kicked off' into Yeading Brook, when crossing Bailey Bridge. This should also improve point No.2.

Correspondence requested by FMC

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	02/10/2017 Am to PM	VISIT BY:	CRG
WEATHER:			
Time	Description		
	Cold start, dry with sunshine		

Site operations

Work in hand	Installation of River Crane Bailey Bridge (north of Pump Lane) onto foundation pads. Completion of cropping of WYBPM and part concrete pour of wing wall Piling at EGUCPM continues. CGL groundwater sampling of lagoon drainage trenches from extraction points. Installation of drainage channel and sump tank for wheel wash re-circulation. Installation of upstream River Crane coffer dam and pumps. Pipe laying for river diversion pumping. CGL toolbox talk to establish material management plan for arising's of WGUC cropping.
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Observations

- 1) CGL to be on site full time during River Diversion works starting w/c 02/10/17.
- 2) 6F5 fill used to backfill drainage trenches of wheel wash, this will need to be firmly compact to accommodation heavy traffic as it crosses the exit ramp of the washer.
- 3) When cropping of WGUCPM starts tomorrow a material management plan needs to be established. 6F5 to be reused in access ramp construction. Dark cohesive and granular material (if encountered) will need to be stockpiled as contaminated soil. Natural arising's should be stockpiled separately, sampled and proven not hydrocarbon impacted before adding to existing clean stockpile.
- 4) Possibility to temporally stockpile WGUC cropping arising's in railway triangle area as the lagoon complex is full. CRG suggests the area is drained of existing surface water, raised reusing 6F5 to a level above the low lying groundwater and a membrane or impermeable layer installed; it is also advisable to cover this material from rainfall if it is contaminated to avoid cross contamination into surface water.
- 5) Concrete cuttings from pile cropping stockpiled east of WYBPM west of lagoon bund wall.
- 6) Installation of pipework from River Crane pumps ongoing.
- 7) Surface scrape of haul road along east of River Crane, topsoil added to stockpile #1
- 8) Vegetation scrape and removal of soil bank along the west Yeading Brook bank, arising's are natural and added to stockpile #1
- 9) Mobilisation and setup in WGUC ready for cropping works to commence tomorrow. Yellow herras fencing erected and working areas marked out.

Sampling and/or testing undertaken or observed

Two groundwater samples were taken from the lagoon drainage trenches and submitted for laboratory analysis. (Lagoon1 DP1 and Lagoon 2DP2) The water was extracted from the extraction pipes using a low flow pump.

A geotechnical testing scheme needs to be established for the material used to backfill the redundant channel of the River Crane after the diversion works are completed.

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

- 1) Any natural arising's that appear to be clean from the WGUC cropping excavation, should be stockpiled separately and sampled before they are added to the existing clean stockpile #7. There is a risk that the natural arising's are hydrocarbon impacted and should be tested before they are assumed to be clean so to avoid cross contamination of stockpile #7.
- 2) Lorry delivering the Bailey bridge along Pump Lane (NW of the site) got stuck and sunk in the haul road, the 6F1 used may not be suitable for future heavy traffic or require further compaction.

Correspondence requested by FMC

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	03/10/2017 Am to PM	VISIT BY:	CRG
WEATHER:			
Time	Description		
	Cold start, dry with clear spell of sunshine		

Site operations

Work in hand	Piling at EGUCPM nearing completion. CGL surface water sampling of rail triangle and Lagoon 3 trench. Wheel wash drainage and sump installed. River Crane pipe laying completed. Toolbox talk on safe off loading and swinging chains when lifting. Delivery of Yeading Brook pumps and generators for both YB and RC.
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Observations

- 1) River Crane Bailey Bridge (north of Pump Lane) completed.
- 2) Pipe laying along River Crane west bank completed, electrician installing pump generators
- 3) Cropping and blinding completed in WYBPM.
- 4) Wheel wash drainage trench and sump tank installed.
- 5) Preparatory works for WGUC pile cropping underway, stepping and profiling of extreme northeast banks and lagoon bund as per CGLs approved specification, yellow herras fencing erection around proposed excavation. Pile mat 6F5 reused to build machine working platform.
- 6) Conway are waiting for permission from the local authority to dam the River Crane.

Sampling and/or testing undertaken or observed

Two surface water samples taken from standing water in rail triangle and lagoon 3 trenches. Water in the lagoon trench is rainwater and highly unlikely to be contaminated as lagoon 3 remains unloaded with soil and water has only made contact with clean membrane surface. Standing water in rail triangle is likely to be groundwater as the exposed ground level in this area is low lying. GW sampling in adjacent CGL and Environ BHs and no visual or olfactory indication of contamination indicate this water to be clean. Samples were taken to provide factual clarification.

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

Correspondence requested by FMC

Joe Owen's (H&S) requested copies of CGL MMP and up to date stockpile management plan.

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	04/10/2017 Am to PM	VISIT BY:	CRG
WEATHER:			
Time	Description		
	Cold start, dry, sunny with intervals of cloud		

Site operations

Work in hand	Piling at EGUCPM nearing completion. Toolbox talk on working in cold, wet and dark conditions. Works to complete Lagoon 3 underway, haul road levelling, trench joining and membrane edge exposure ready for Butek tomorrow. WGUCPM cropping excavation works. Off-loading of steel, YB generators and river diversion lining materials.
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Observations

- 1) New stockpile of clean topsoil formed against lagoon 2 bund outside of EYBPM area, this is comprised of arising's from removing the east Yeading Brook bank and levelling works.
- 2) Cropping of WGUCPM started in lower western section, dark clay and dredged material was observed in the upper 0.2 to 0.4mbgl. This was temporally stockpiled on plastic membrane between the lagoon bund and concrete pile clipping stockpile north of the haul road. In the short-term, the contaminated soil must be covered and protected from rainfall induced leeching out into the Yeading Brook and EYBPM downslope to the west. The material will be transferred to Lagoon 3 once its construction is completed and approved. Natural arising's showed no indication of contamination comprising of a brown silty clay and alluvium, this was stockpiled with clean topsoil immediately east against bund wall (mentioned in observation 1).
- 3) Works to complete Lagoon 3 underway, rainwater in trench drained to adjacent ground surface outside of the bund area. Discharge was clear rainwater but not pumped directly into watercourse so not to disturb sediment and cause possible clouding of the water.
- 4) Lagoon haul road surface scraped, and membrane edges exposed ready to join. The entrance to Lagoon 1 was infilled to prevent access whilst lagoon 2 and lagoon 3 trenches were joined across the haul road. Butek to arrive tomorrow to merge membrane and repair torn sections.
- 5) Piling crane used in EYBPM area to off-load steel, generators onto the ground. Yeading Brook pump base platforms were lifted into the channel and levelled into position causing displacement of the natural sediment and temporal clouding of the Brook. The sediment settled within two hours of the lift and no deviations were identified in surface water laboratory results undertaken the following day (Round 8: 05/10/2017) when compared to samples obtained further upstream and downstream of the silting event. CRG advised that long-term or regular silting of the channel should be avoided and

in such an event of prolonged clouding of the water, natural measures of silt capture should be considered such as the placement of hay bales into the channel to capture fine materials whilst maintaining natural flow. Prolonged or regular silting of the channel will coat the surface of aquatic vegetation limiting sunlight penetration and therefore reducing the density of plant species and oxygenation of the water. Short-term silting events of natural sediments from isolated works are not considered a risk though should be prevented or minimised where possible.

- 6) Environmental audit from Environ undertaken with no new issues raised. Visit from CGL Director (Nick Langdon), introduced to PM Derek Daily and CRG provided detailed walk around brief of site progress, areas of concern, technical design and material management.

Sampling and/or testing undertaken or observed

Soil samples taken from dark cohesive and granular arising's from WGUC piling cropping excavation and natural arising's to determine the possible extent and depth of hydrocarbon impacted soil.

Bulk bags of stockpile #10 and stockpile #11 taken and submitted for geotechnical testing, material intended to be used as fill for redundant River Crane channel after diversion works are completed.

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

Contaminated arising's from WGUCPM temporarily stockpiled outside of the lagoon complex on plastic membrane must be protected from rainfall and moved into Lagoon 3 as soon as this is completed.

Site Observation Report Form



Correspondence requested by FMC

Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	05/10/2017 Am to PM	VISIT BY:	CRG
WEATHER:			
Time	Description		
	Cold start, dry, sunny with intervals of cloud		

Site operations	
Work in hand	Piling at EGUCPM completed and rig dismantling. Butek continue repair works in Lagoon. WGUCPM cropping excavation works, arisings to stockpile 12. Pumps lifted into Yeading Brook and pipe laying works begin. CRG to sample GW and surface water of existing CGL BH, Yeading Brook and Compound discharge point.
Observations	
1) WGUCPA stockpiled outside of lagoon complex on plastic lining as some dark cohesive and granular dredged material encountered. CRG advised that this should be protected from rain to reduce the potential risk of leeching out into the adjacent Yeading Brook. 2) Lagoon repair and completion works underway with Butek, lagoon 1 access blocked with bund, bund material was sourced from stockpile 11. 3) Groundwater samples and in situ testing taken from CGL boreholes, upstream, mid-stream and down-stream of Yeading Brook and surface water discharge point.	

Sampling and/or testing undertaken or observed

Groundwater samples taken from weekly groundwater and surface water monitoring round.

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

May be a good idea to source waders and update the SSRA when sampling Yeading Brook throughout the winter months when discharge is higher and bank conditions are less stable.

Correspondence requested by FMC

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	06/10/2017 Am to PM	VISIT BY:	CRG
WEATHER:			
Time	Description		
	Cold start, dry and largely sunny		

Site operations	
Work in hand	6F5 fill from WGUCPM added on approach road to Pump Lane Bailey Bridge. River diversion lining materials moved to diversion bank. TAC completing steel works on WYBPM wind wall, some minor profiling works to edge. Pumps added to Yeading Brook channel and pipe laying works beginning. Generators installed and wired up for Yeading Brook pumps. WGUCPM cropping arisings stockpiled between concrete trimmings and lagoon bund. Butek completed the lining of lagoon 3 and haul road.
Observations	
1) Dark cohesive and granular material observed in WGUC pile arisings, this was stockpiled on plastic lining outside of the lagoon complex (stockpile 12) north of haul road. The material was observed in random lobes within the Made Ground, Reworked Weathered London Clay and Alluvium at approximately 0.3 to 0.6mbgl with a slight to moderate hydrocarbon and/or organic odour. 2) A levelled working platform was cut into the existing Yeading Brook bank to provide an operating platform to lift the pumps into the channel. The works caused some clouding of the water and a small amount of natural material was deposited into the channel. 3) Potential risk of cross contamination to Yeading Brook and underlying natural ground from hydrocarbon impacted arisings from WGUC pile cropping (stockpile 12). The stockpile has now exceeded the boundaries of the plastic lining and dark material has been mixed with natural arising's. The stockpile is positioned upslope of YB therefore effective management of the hydrocarbon impacted material is vital, CRG advised that the material is covered to protect from rainfall and moved into the lagoon as soon as repair works are completed. 4) Groundwater ingress at the base of the WGUCPM at approximately 2.0mbgl, no GW in EGUCPM therefore this is likely lateral seepage from standing water in 'rail triangle'. No visual or olfactory indication of contamination was observed in the GW.	

Sampling and/or testing undertaken or observed

Four soil samples were taken across the WGUCPA (stockpile 12)

Water samples taken from base of WGUCPM

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

Currently pumping GW ingress in WGUCPM into IBC containers pending testing results, a full dewatering strategy will need to be established for further excavation works of the WGUCPM as Conway would like to pump directly into the canal.

Correspondence requested by FMC

Interpretation of laboratory results as soon as they become available.

Site Observation Report Form



Correspondence received from FMC

Updated version of the stockpiles, including volumes (added to job file).

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	09/10/2017 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Cold start, dry and overcast.		

Site operations	
Work in hand	Cropping of piles ongoing at EGUCPM. WGUCPM cropping excavation works. Installation of pumps at Yeading Brook and River Crane. Enabling works for river diversion (re-profiling of channel etc)
Observations	
1) During pile cropping works at EGUCPM partially stabilised ground was excavated. FM Conway required options relating to potential reuse of this material or disposal. It was deemed that all material should be transported to Tom Blackwell's soil hospital as limited space is present for long term stockpiling of materials at EGUCPM. 2) Ground profile from surface to pile cropping level at EGUCPM consisted of approximately 500mm of 6F5 underlain by 150mm stabilised ground, 1000mm of partially stabilised ground (not set), 1500mm of black alluvial clays with strong phenol/chemical odour (gas works waste). Alluvial gravels were exposed within the base of the excavation. 3) Discussion with Brian (FM Conway) regarding ponded water within WGUCPM wingwall. Water is likely sourced from ponded water within Railway Triangle following it's infilling with 6F5. Discussion to be had with Keith (Environment Agency – 10/10/2017) regarding potential need for discharge consent if FM Conway pump to ground. 4) Discussion with Mo (FM Conway) regarding suitability of material on site for use as backfill within River Diversion works. Following review of Create drawings TWF discussed issue with Owen Flower (CGL). Owen to contact Create to clarify construction assumptions. Response to be provided to Mo 10/10/2017.	

Sampling and/or testing undertaken or observed

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

Originally potentially non re-useable arising's from WGUCPM were temporarily stockpiled outside of the lagoon complex on plastic membrane. However, it is not known if plastic membrane is still being placed before arisings are deposited. Membrane should be present beneath all stockpiled material not located within Lagoons. Should rainfall be forecast/occur the stockpiles should be covered in order to mitigate against leachate build up.

Correspondence requested by FMC

- 1) Options for pumping/disposal of ponded water within WGUCPM wingwall excavation.
- 2) Suitability of site won material for use as backfill within River Diversion works.

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	10/10/2017 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Cold start, dry and overcast.		

Site operations	
Work in hand	Cropping of piles ongoing at EGUCPM. WGUCPM cropping excavation works. Installation of pumps at Yeading Brook and River Crane. Enabling works for river diversion (re-profiling of channel etc). Fish rescue within Yeading Brook. Placement of 6F5 drainage layer within partially completed section of Lagoon 2.
Observations	
1) Limited work underway on site however, re-profiling of the river diversion channel was ongoing. 2) Meslec had encountered potential smear zone to top of gravels within wing wall excavation at the eastern GUC. Excavation is currently dry but could be inundated following rainfall. This future water is unlikely to be uncontaminated and therefore will need to be disposed of. CGL has suggested that arrangements be made with Tom Blackwells for disposal of potentially contaminated waste water from excavations on main Southall site.	

Sampling and/or testing undertaken or observed

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

1) CGL assumes that completion of Lagoon 2 will be undertaken alongside dewatering of WGUC wing wall excavation prior to further excavation of wing wall. Material being excavated should be stored within the lagoon. Based on previous findings within the WGUC pile mat the material to be excavated could potentially be none re-usable.

Correspondence requested by FMC

- 1) Results of water analysis and assessment of standing water within WGUC wing wall excavation. Water deemed to exceed freshwater EQS of cadmium, chromium 3, copper, nickel, zinc and mercury. CGL recommended that water be disposed off site.
- 2) Derek (FM Conway) suggested that trial pits be undertaken to investigate formation level of the Flood Alleviation Scheme. TWF to discuss with Mark (Surveyor) regarding RAMS, testing locations and required depths. Anne Curtis (CGL) will be on site on 12 to 13/10/2017 to undertake trial pitting, if undertaken.

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	12/10/2017 Am to PM	VISIT BY:	ALC
WEATHER:			
Time	Description		
	Dry and overcast with sunny intervals.		

Site operations	
Work in hand	Cropping of piles completed at WGUCPM. Strut box in place at west wing wall. Canal wall tie rods exposed. Gabion mattress construction for River Crane/Yeading Brook diversion River Crane – excavation of silt in channel to enable removal of concrete channel structure. Silt being placed in bunded holding area within the channel to the south of the silt excavation area. TAC completing steel works on WYBPM wing wall Diversion pumps in operation for Yeading Brook and River Crane.
Observations	
1) WGUC wall tie rods exposed and found to encroach into edge of abutment excavation. Surveyed by Mark (FM Conway). Tie rods were observed to be bolted through concrete piled wall to steel bracing which runs along the length of the front face of the wall. Tie rods are 20mm dia spacing at approx. 3.4m centres and 2.5m in length. The bracing is bolted to the wall in between the tie rods at 600mm centres. 2) WGUC water ingress observed to be flowing from the canal through the canal wall and into the southern abutment excavation where water has ponded and become contaminated by the Made Ground. Attempts have been made to temporarily plug this with clay to prevent further ingress.. 3) River Crane – a break in the bund occurred resulting in silt from the holding area escaping into the clean river water. The break was plugged with clay to prevent further leakage.	

Sampling and/or testing undertaken or observed

- 1) At the request of Mo (FM Conway) 1 bulk bag of silt was taken to test for reuse. The estimated quantity of dredged silt is around 200m³. This is only likely to be reusable if mixed in with topsoil. Derek(FM Conway requested the sample not be tested for grading.
- 2) Trial pitting to assess formation level and sample for potential contamination of the Flood Alleviation Scheme as requested by Derek (FM Conway) was not undertaken today due to lack of availability of excavator. Anne (CGL), Derek (FM Conway) and Mark (FM Conway) discussed the issue of whether the RAMS for the trial pitting needed to be revised and approved due to the depth of excavation required to reach formation level (5m to 6m). It was agreed that trial pits are to be excavated at the toe of the slope where excavation depths will be less (1m to 2m) to formation level. This will negate the need for the RAMS to be revise for deep trial pits and allow an initial assessment and contamination testing of the formation material. Further testing and inspection can be done during the excavation works. The shallow trial pits are to be carried out once an excavator becomes available tomorrow or next week.

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

- 1) It is likely that the silt will only be re-usable once dried and only if mixed in with topsoil.

Correspondence requested by FMC

Derek (FM Conway) requested the following to be confirmed from Dominic (CSPLondon) and Robin (CGL) regarding WGUC wall tie rods:-

- i) Were these tie rods know/ anticipated in the ground
- ii) Address likely impact on anchor/wall and advise on methodology to proceed.

The following recommendations/confirmation was provided by Dominic (CSPLondon):-

- i) There is no evidence to suggest that the tie rods are providing structural support to the canal wall. The concern is more the open excavation and lateral pressure from the canal against the concrete piles will result in inward movement away from the canal.
- i) Recommendation that no further excavation is undertaken and no man-entry allowed into the excavation until the over excavation behind the struct boxis filled with dry mix concrete to stabilise the excavation face adjacent to the canal, and plug the seepage.
- ii) Daily movement monitoring of the canal wall and trigger levels recommended.

- iii) Dominic (CSPLondon) to look into tie in details between the new and old sheet pile walls.
- iv) The abutment to the east of GUC is significantly further away from the canal wall than the western abutment and therefore if tie rods exist on the eastern canal wall aswell they would not be impacted by the pile cap. Work on the eastern abutment excavation is to proceed with caution.

Correspondence received from FMC

See above.

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	13/10/2017 Am to PM	VISIT BY:	ALC
WEATHER:			
Time	Description		
	Dry and overcast with sunny intervals.		

Site operations	
Work in hand	WGUC concrete plugging behind strut box. River Crane/Yeading Brook diversion gabions being constructed. River Crane – excavation of silt in channel complete, Breaking out concrete channel and reprofiling eastern side slope. TAC completing steel works on WYBPM wing wall
Observations	
1) WGUC concrete plug behind strut box in southern corner of excavation has stabilised excavation side wall adjacent to canal and slowed water ingress. Some seepage of water observed. 2) River Crane – breaking out of concrete channel to formation level. Loose/soft material on formation needs to be cleaned off before the formation can be verified however, initial observations indicate the formation ground to be a firm brown clay (London Clay Formation) as anticipated. Some soft spots at formation level are expected and these will need to be removed and replaced with suitably compacted cohesive backfill (Class 2). 3) River Crane channel excavation has exposed a vertical face at the toe of the western slope (below overflow car park), 1.3m high. The overall height of the main slope is about 6m with a slope at approximately 45 degrees . There is a 1.0m wide berm at the toe, above the channel excavation. The slope comprises sand and gravel with 300mm to 400mm of topsoil on the berm. Some localised slipped areas were noted in the face of the channel excavation, but confined to the berm, and not encroaching back to the 45 degree (approx.) main slope face.	

Sampling and/or testing undertaken or observed

- 1) CGL are to undertake hand shear vane/mexicone testing on formation of River Crane channel excavation once loose/soft excess material has been cleaned off, expected to happen on Monday or Tuesday next week.
- 2) Trial pitting to assess formation level and sample for potential contamination of the Flood Alleviation Scheme as requested by Derek (FM Conway) was not undertaken today due to lack of availability of excavator. Mark (FM Conway) confirmed that an excavator will be available next week to undertake the trial pits.
- 3) Anne (CGL) took 7 bulk samples of Class 6F2 from across the site for grading analysis. This had not been undertaken previously as it was originally intended the Class 6F5 would not be reused on site or left in place across the pile mats (see Comments below)

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

Suggest CGL site engineer visually monitors the channel excavation and side slope on a daily basis for observations on deterioration/instability during temporary exposure prior to benching/backfilling.

Correspondence requested by FMC

- 1) Derek (FM Conway) requested the formation of the River Crane channel excavation is verified by CGL prior to backfilling. Anne (CGL) spoke to Mo (FM Conway) who confirmed the concrete channel is to be completely removed before the channel excavation is backfilled and anticipates this will be ready to backfill on Monday/Tuesday next week. Anne (CGL) confirmed that verification of the formation can be carried out once all loose/soft excess material is cleaned from the formation.
- 2) Mark (FM Conway) requested grading result on stockpiled material intended for reuse as backfill to River Crane channel infill. Anne (CGL) confirmed these test results should be available back from the laboratory by Friday next week. It is anticipated the material will be classified as Class 2, probably Class 2C (test results to confirm).
- 3) Derek (FM Conway) queried why gradings need to be carried out on the Class 6F5 as these have already been done on the stockpiled Class 6F5, and plate bearing tests on the pile mats have shown the material to be satisfactorily compacted. Anne (CGL) to discuss with Robin (CGL) and Owen (CGL)

Site Observation Report Form



and respond back to Derek (FM Conway).

Correspondence received from FMC

Derek (FM Conway) informed Anne (CGL) not to schedule grading tests on Class 6F5 until a response from Robin/Owen (CGL) can confirm these are necessary.

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	16/10/2017 Am to PM	VISIT BY:	ALC
WEATHER:			
Time	Description		
	Dry and overcast with sunny intervals.		

Site operations

Work in hand	River Crane –breaking out concrete channel and reprofiling eastern side slope ongoing. River Crane/Yeading Brook new diversion channel excavation. River Crane/Yeading Brook new diversion Reno-mattress construction ongoing. TAC completing steel works on WYBPM wing wall
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Observations

- 1) River Crane – breaking out of concrete channel. 300mm below formation level (underside of concrete river channel) excavated to remove soft/loose spots. Ponded water and soft area at northern end of channel noted <40kPa. Commenced reprofiling of lower section of western slope (beneath car park), approx. slope gradient 30 degrees with a 2.0m high vertical face at crest.
- 2) River Crane/Yeading Brook new river channel :-
 West side of excavation comprises River Terrace Gravels soft/firm grey/brown clay with pockets and channels of fine to coarse orange brown fine to coarse sand and gravel.
 East side of excavation comprises Alluvium soft to firm grey/black clay with abundant roots.

Sampling and/or testing undertaken or observed

- 1) Hand shear vane tests (5 tests) undertaken by CGL within existing River Crane channel at 300mm below formation level. In northwest corner adjacent to concrete channel test results were below 40kPa. Elsewhere test results were between 50kPa and 120kPa.
- 2) Trial pitting to assess formation level and sample for potential contamination of the Flood Alleviation Scheme still to be done. Mark (FM Conway) will confirm when an excavator will be available to undertake these trial pits.

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

- 1) Anne (CGL) / Mo (FM Conway) discussed verification of formation of River Crane channel. Mo (FM Conway) to ensure ponded water and soft area in northwest corner is cleaned off prior to backfilling with Class 2C.
- 2) River Crane existing channel western slope - no instability observed in temporary slope profile. Mo (FM Conway) intends to start benching up from toe of slope where existing slope will tie in with new bund diversion. Beyond the tie in, northwards, Anne (CGL) confirmed the western slope will not need benching and can be reprofiled at 1v:3h similar to the eastern side.

Correspondence requested by FMC

- 1) CGL to verify formation surface of River Crane channel prior to backfilling once FM Conway have removed soft spot in northwest corner of excavation and completed southern section of channel excavation down to formation level (300mm below underside of channel).

Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	17/10/2017 Am to PM	VISIT BY:	ALC
WEATHER:			
Time	Description		
	Dry and overcast with sunny intervals AM, overcast slight drizzle PM.		

Site operations	
Work in hand	River Crane –breaking out concrete channel, excavating below underside of channel and reprofiling east side slope. Moving excavated silt and excavated material to stockpile in lagoon. River Crane/Yeading Brook new diversion channel west side slope reprofiling to 1v:3h. River Crane/Yeading Brook new diversion channel east side slope benching. River Crane/Yeading Brook new diversion reno mattress construction ongoing. TAC completing steel works on WYBPM wing wall
Observations	
1) River Crane – breaking out of concrete channel completed. 300mm below formation level (underside of concrete river channel) excavated to remove soft/loose spots. Ponded water and soft area at northern end of channel has been removed. Western slope (below car park), lower section reprofiled to approx. slope gradient 30 degrees with a 2.0m high vertical face at crest. 2) River Crane/Yeading Brook new channel:-- West side of excavation reprofiled to 1v:3h in River Terrace Gravels. East side of excavation 1m x 1m benching commenced in Alluvium. 3) Class 6G (gabion rock) stockpile noted at far northern end of site adjacent to Flood Alleviation Scheme Scheme area.	

Sampling and/or testing undertaken or observed

- 1) No insitu testing undertaken today.
- 2) CGL to carry out hand shear vane tests on River Crane/Yeading Brook east benched profile once benching complete and on River Crane existing channel at formation level once concrete channel excavation at southern end is complete.

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

- 1) River Crane west slope (beneath car park area). Anne (CGL) confirmed to Mo (FM Conway) that the benched steps could be reduced to less than 1.0m to a minimum of 300mm as required, but should not be greater than 1.0m. Anne (CGL) suggested waiting until the river diversion pipes were relocated from the top of the slope to enable benching to start at the top. This will make it easier to bench and reduce the risk of instability of the slope over the short term.
- 2) River Crane/Yeading Brook new channel – Anne (CGL) discussed benching to east slope with Steve (FM Conway). Benches need to be taken back such that when overfilled with Class 2C and trimmed to 1v:3h, the Alluvium is not exposed on the slope surface. i.e. the new slope will be formed of Class 2C cohesive fill. Benching may encroach on the pile mat behind the slope. Anne (CGL) stated that the benches may be reduced from 1.0m depth if necessary.

Correspondence requested by FMC

CGL to provide verification of River Crane channel and Yeading Brook/River Crane new channel at formation once completely excavated. To be verified by CGL using hand shear vane testing.

CGL to provide verification of River Crane channel west benched profile and Yeading Brook/River Crane new channel east benched slope once excavated.

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	18/10/2017 Am to PM	VISIT BY:	TWF
WEATHER:			
Time	Description		
	Overcast with occasional patches of rain		

Site operations

Work in hand

WGUC wingwall excavation
 River Crane/Yeading Brook diversion gabions being constructed
 River Crane fish rescue of final stretch required to enable earthworks
 River Crane – excavation of silt in channel complete, breaking out concrete channel and reprofiling eastern side slope.
 River Crane – western side slope has been cut back and benching has begun
 TAC completing steel works on WYBPM wing wall
 Stockpile 12 is being added to Lagoon 2

Observations

- 1) Water is noted to be continuously flowing into the WGUC wingwall excavation in the south western corner. This water flows directly into the standing water to the north. In addition to this water was noted to be flowing into the wing wall excavation at the southern side. This was noted to be mixing with the hydrocarbon impacted clays and developing a slight hydrocarbon sheen on its surface. The second water body was separate from the main northern water body. To ensure this continues FM Conway are going to pump the second water body into IBC and store on site ready for disposal.
- 2) Stockpile 12 and all arisings from the WGUC wingwall excavation are being moved to Lagoon 2.
- 3) Construction of the bund located at the River Crane end of the river diversion is currently underway with 150mm layers being rolled 16 times (this number is higher than required by the specification). Benching is required along the western side however, construction of these benches is currently limited by the pumps at its crest, diverting water from further upstream.
- 4) Benches have been cut into the eastern bank of the Yeading Brook section of the river diversion. These benches are required due to the presence of soft Alluvium at formation level. The benches are to be filled with Class 2C material and suitably compacted.

Sampling and/or testing undertaken or observed

1) CGL undertook hand shear vane/mexicone testing on formation across the river diversion. Material ranged in shear strength from 65kPa to 150Kpa (CBR 2.8% to 6.5%). First layer of backfill within the River Crane section of the river diversion measured between 30kPa and 90kPa, following compaction. CGL requested the soft strip along western side was further compacted.

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

- 1) Suggest CGL site engineer visually monitors the channel excavation and side slope on a daily basis for observations on deterioration/instability during temporary exposure prior to benching/backfilling.
- 2) Water ingress noted at multiple sections along southern shored face of WGUC wingwall. FM Conway to look at ongoing monitoring data to ensure no movement over trigger levels.

Correspondence requested by FMC

- 1) Derek (FM Conway) requested the CGL provide support in regards to compaction of 6N material to be installed between wing wall pile cap and interior batter.
- 2) ED (FM Conway) requested CGL sign off on previously agreed slope batter construction.

Site Observation Report Form



Correspondence received from FMC

Site Observation Report Form



SITE:	Southall Western Access	JOB NO:	CG/28308
Date and time:	19/10/2017 Am to PM	VISIT BY:	CRG
WEATHER:			
Time	Description		
	Overcast, dull and mild with occasional patches of rain		

Site operations

Work in hand	WGUC wingwall excavation and cropping works WGUC lagoon bank benching River Crane/Yeading Brook diversion gabions construction and east bank stepping River Crane breaking out concrete channel River Crane western side slope benching and compaction TAC completing steel works on WYBPM wing wall
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Observations

- 1) Hydrocarbon impacted water ingress flowing into the WGUC wingwall excavation to the southeast corner was pumped into IBC units, water was black with a light hydrocarbon odour observed.
- 2) Works to bench the lagoon and northeast corner of the WGUCPM were underway, arisings were placed on top of the existing lagoon bund to the lower section.
- 3) Construction of the bund located at the River Crane end of the river diversion is continues with 150mm layers being rolled 16 times (this number is higher than required by the specification). Mexecon tests undertaken after rolling had a CBR value typically between 3 and 5.
- 4) Class 6A delivered for diversion channel bed, material appeared to not be well-graded natural

Sampling and/or testing undertaken or observed

1) CGL undertook hand shear vane/mexecone testing on formation across the river diversion. Material ranged in shear strength from 65kPa to 150Kpa (CBR 2.8% to 6.5%). First layer of backfill within the River Crane section of the river diversion measured between 30kPa and 90kPa, following compaction. CGL requested the soft strip along western side was further compacted.

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

- 1) Suggest CGL site engineer visually monitors the channel excavation and side slope on a daily basis for observations on deterioration/instability during temporary exposure prior to benching/backfilling.
- 2) Water ingress noted at multiple sections along southern shored face of WGUC wingwall. FM Conway to look at ongoing monitoring data to ensure no movement over trigger levels.

Correspondence requested by FMC

- 1) Derek (FM Conway) requested the CGL provide support in regard to compaction of 6N material to be installed between wing wall pile cap and interior batter.
- 2) ED (FM Conway) requested CGL sign off on previously agreed slope batter construction.

Site Observation Report Form



Correspondence received from FMC