

APPENDIX G

Soil Management Strategy and Tracking

FMC-SS-WE-007-B

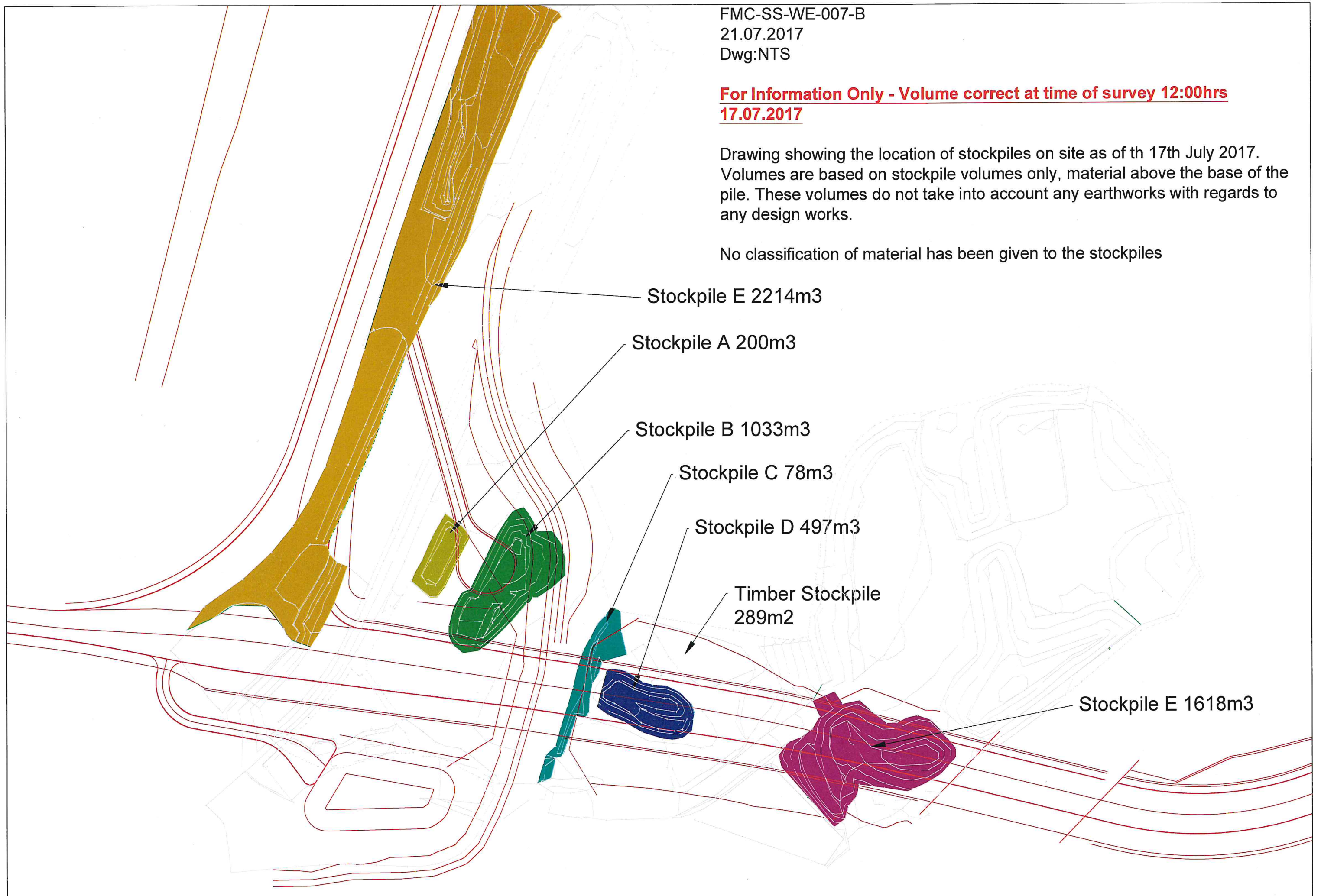
21.07.2017

Dwg:NTS

**For Information Only - Volume correct at time of survey 12:00hrs
17.07.2017**

Drawing showing the location of stockpiles on site as of th 17th July 2017.
Volumes are based on stockpile volumes only, material above the base of the
pile. These volumes do not take into account any earthworks with regards to
any design works.

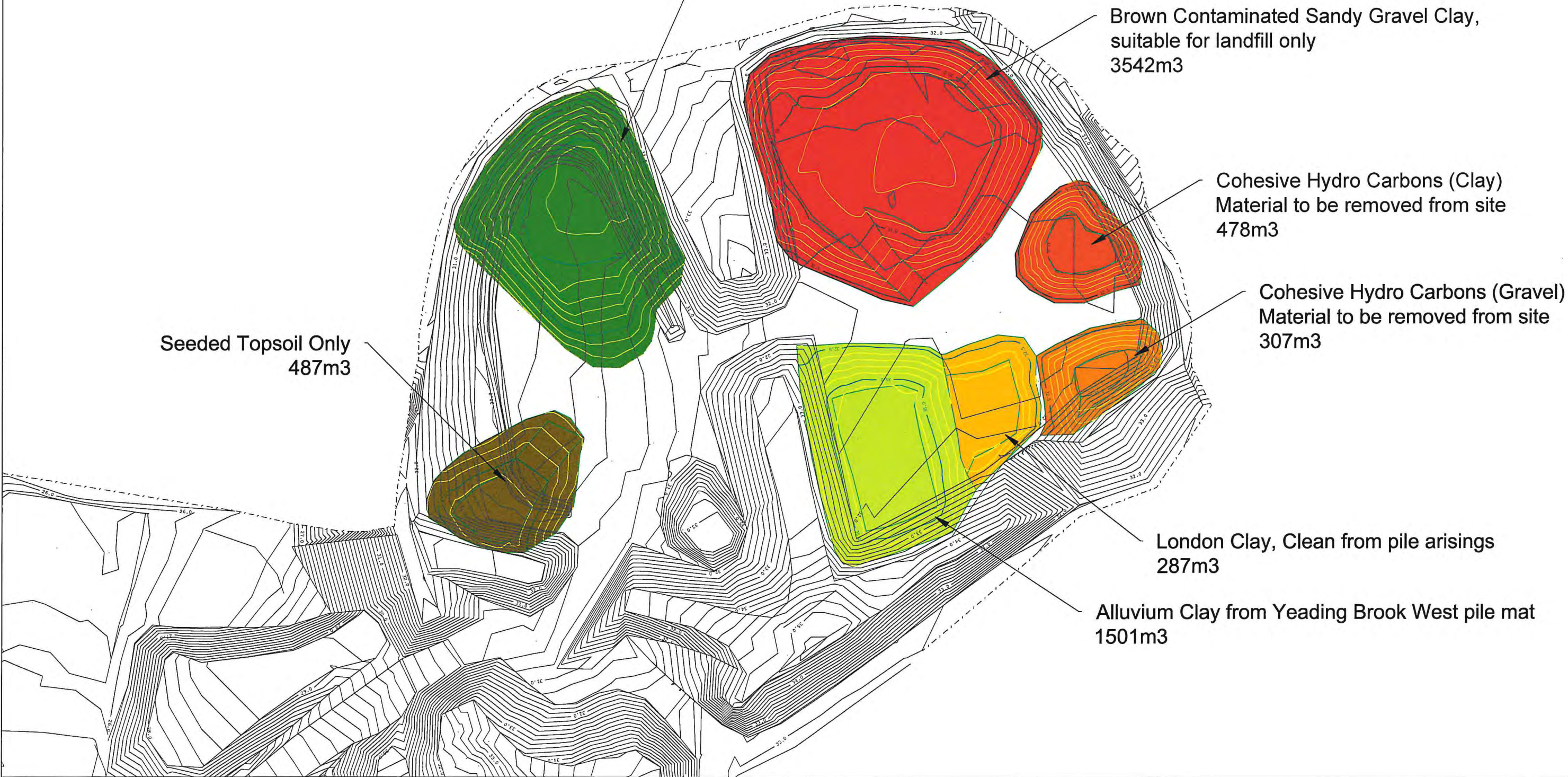
No classification of material has been given to the stockpiles



For Guidance Only

This drawing shows the volume and classification types of stockpiles located in the lagoon areas on site. These volumes are based on a survey carried out on the 13th September 2017.

Volumes in these piles will increase due to the pile arising's from the Grand Union Canal & Yeading East. Also material from the River Crane Diversion is being stored in this area. Seeded Topsoil with timber 2550m3



FMC-SS-WE-040-A
19.09.2017
Dwg:NTS

For Guidance Only

This drawing shows the volume and classification types of stockpiles located onsite on the 14th August 2017



FMC-SS-WE-041-A
19.09.2017
Dwg:NTS

For Guidance Only

This drawing shows the volume and classification types of stockpiles located in the lagoon areas on site. These volumes are based on a survey carried out on the 19th September 2017.

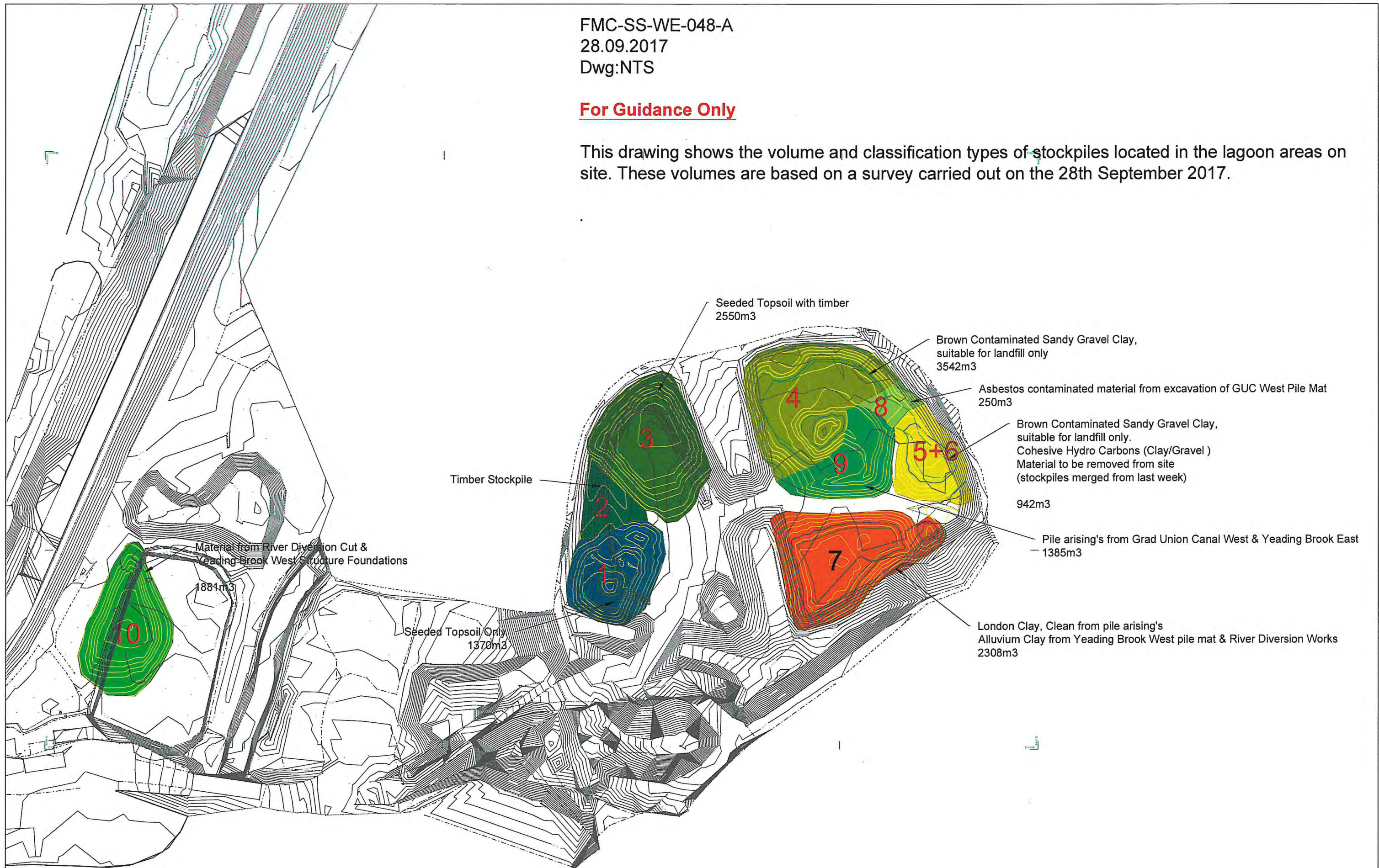
Volumes in these piles will increase due to the pile arising's from the Grand Union Canal & Yeading East. Also material from the River Crane Diversion is being stored in this area.



FMC-SS-WE-048-A
28.09.2017
Dwg:NTS

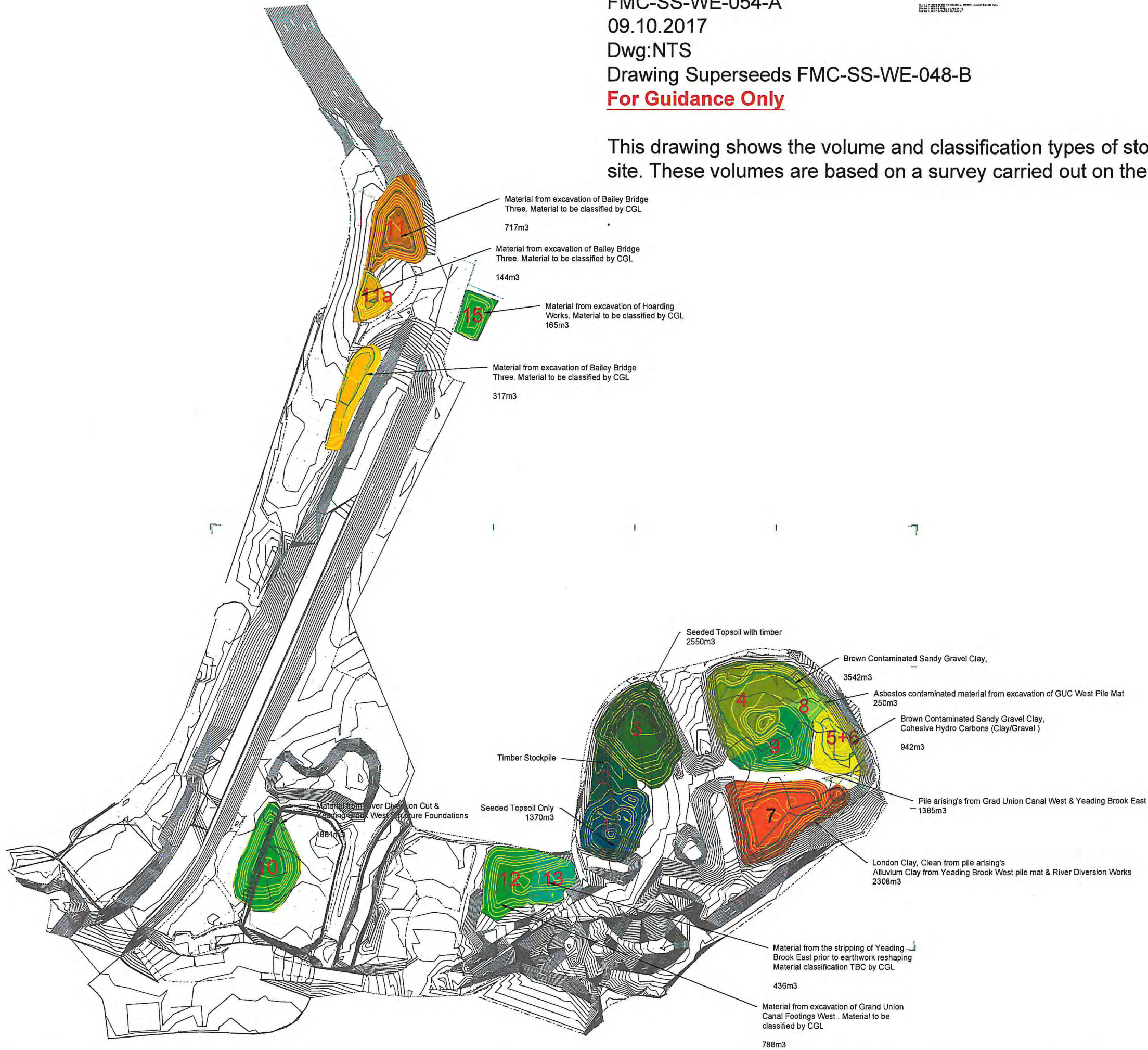
For Guidance Only

This drawing shows the volume and classification types of stockpiles located in the lagoon areas on site. These volumes are based on a survey carried out on the 28th September 2017.



FMC-SS-WE-054-A
09.10.2017
Dwg:NTS
Drawing Superseeds FMC-SS-WE-048-B
For Guidance Only

This drawing shows the volume and classification types of stockpiles located in the lagoon areas on site. These volumes are based on a survey carried out on the 10:00hrs 06.10.2017



For Guidance Only

FMC-SS-WE-057-A
16.10.2017
Dwg:NTS
Drawing Superseeds FMC-SS-WE-054-A
For Guidance Only

This drawing shows the volume and classification type of material to be removed from the site. These volumes are based on a survey carried out on 16.10.2017.

Material from excavation of Bailey Bridge Three. Material to be classified by CGL
717m3

Material from excavation of Bailey Bridge Three. Material to be classified by CGL
144m3

Material from excavation of Hoarding Works. Material to be classified by CGL
165m3

Material from excavation of Bailey Bridge Three. Material to be classified by CGL
317m3

Seeded Topsoil with timber
2550m3

Brown Contaminated Sandy Gravel Clay,
3542m3

Asbestos contaminated material from excavation of GUC West Pile Mat
250m3

Brown Contaminated Sandy Gravel Clay, Cohesive Hydro Carbons (Clay/Gravel)
942m3

Pile arising's from Grad Union Canal West & Yeading Brook East
1385m3

London Clay, Clean from pile arising's Alluvium Clay from Yeading Brook West pile mat & River Diversion Works
2309m3

Material from the stripping of Yeading Brook East prior to earthwork reshaping
Material classification TBC by CGL
570m3

Material from excavation of Grand Union Canal Footings West. Material to be classified by CGL
1555m3

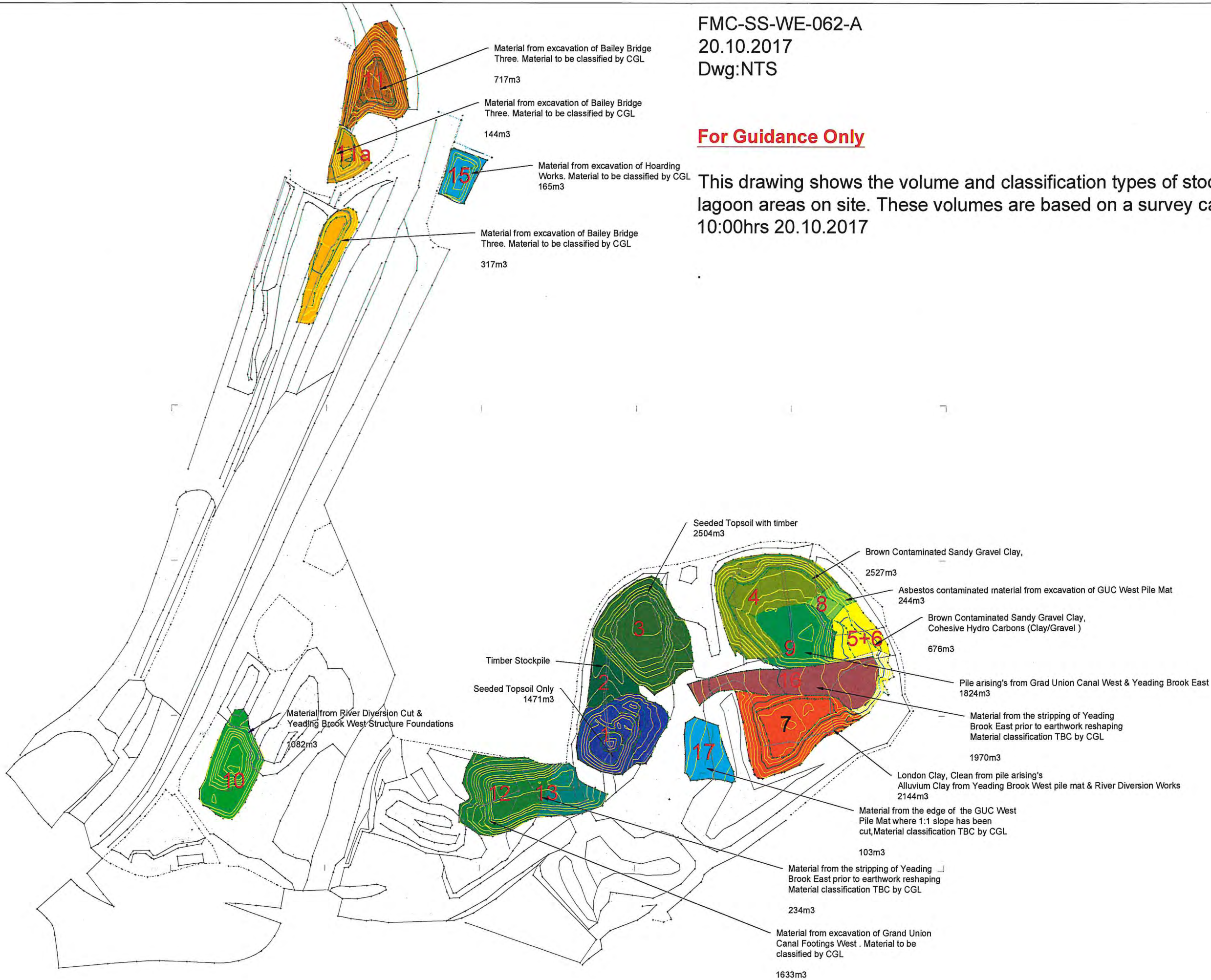
Seeded Topsoil Only
1370m3

Timber Stockpile

Material from River Diversion Cut & Yeading Brook West Structure Foundations
1801m3

For Guidance Only

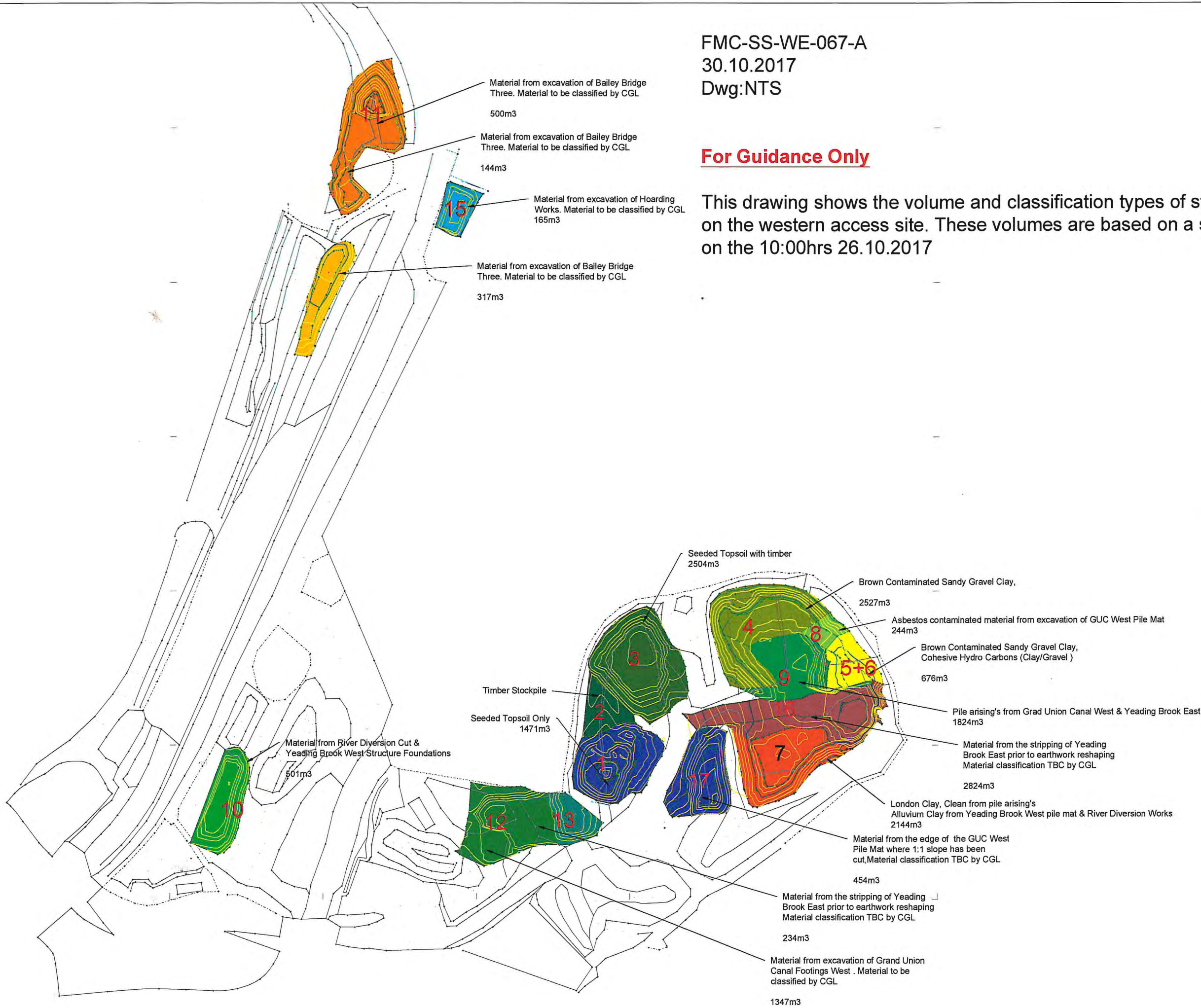
This drawing shows the volume and classification types of stockpiles located in the lagoon areas on site. These volumes are based on a survey carried out on the 10:00hrs 20.10.2017

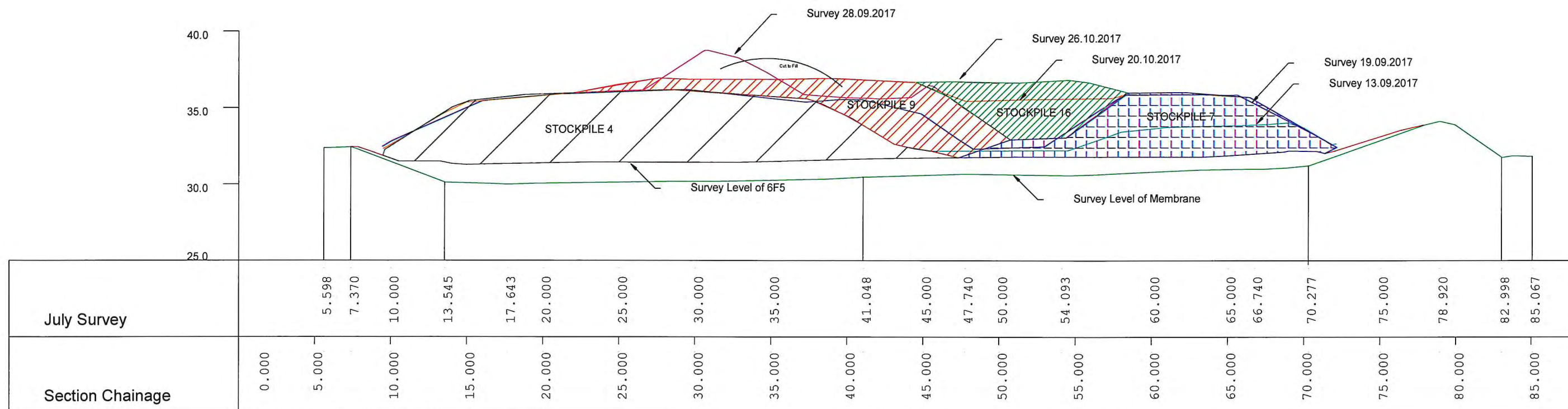


FMC-SS-WE-067-A
30.10.2017
Dwg:NTS

For Guidance Only

This drawing shows the volume and classification types of stockpiles located on the western access site. These volumes are based on a survey carried out on the 10:00hrs 26.10.2017



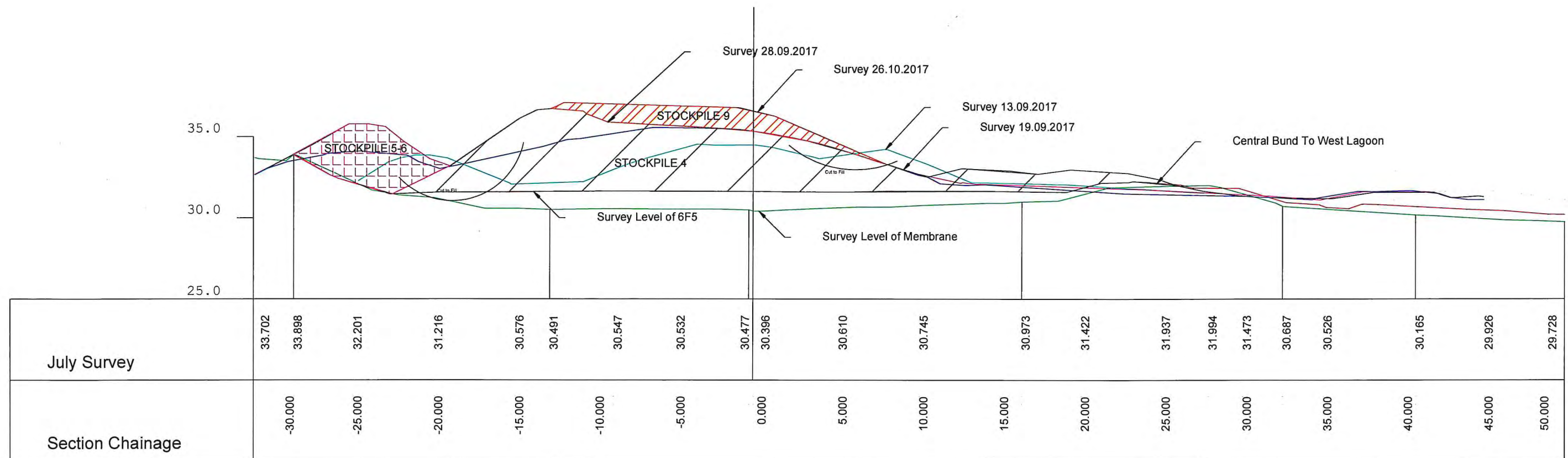


FMC-SS-WE-074-A
03.11.2017
Dwg:NTS

For Information Only

This drawing shows a section through the the existing stockpiles located to the easterly lagoon over the course of filling works. Surveys from July 2017 onwards have been overlaid to produce a detailed section of where different classified material have been overlaid. This model will form the bases for moving the correct materials to fill areas on site.





Chainage 40.0m (510950.5E 179573.0N)

FMC-SS-WE-075-A
03.11.2017
Dwg:NTS

For Information Only

This drawing shows a cross section through the the existing stockpiles located to the easterly lagoon over the course of filling works.
Surveys from July 2017 onwards have been overlaid to produce a detailed section of where different classified material have been overlaid
This model will form the bases for moving the correct materials to fill areas on site.



FMC-SS-WE-076-C

03.11.2017

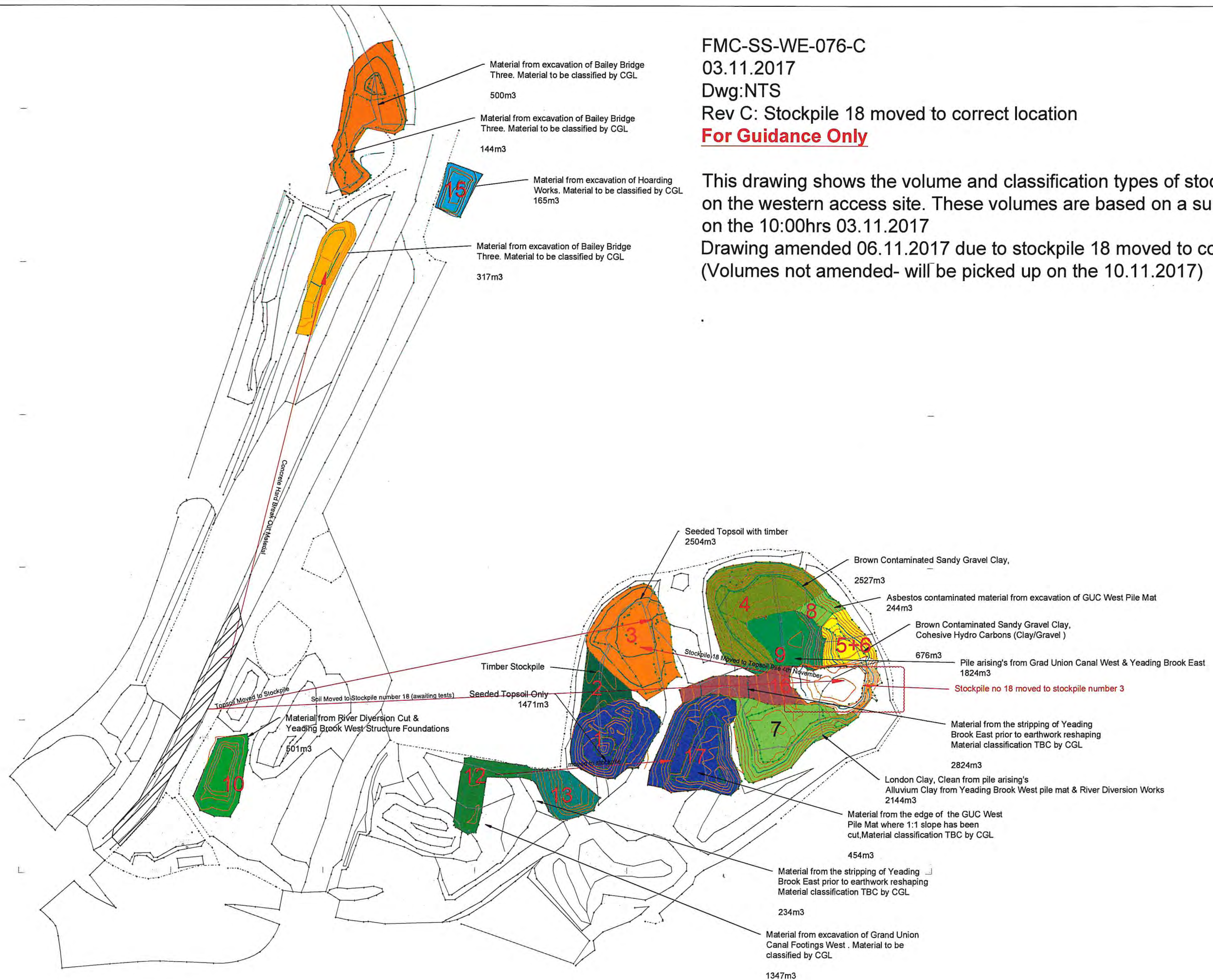
Dwg:NTS

Rev C: Stockpile 18 moved to correct location

For Guidance Only

This drawing shows the volume and classification types of stockpiles located on the western access site. These volumes are based on a survey carried out on the 10:00hrs 03.11.2017

Drawing amended 06.11.2017 due to stockpile 18 moved to correct location (Volumes not amended- will be picked up on the 10.11.2017)

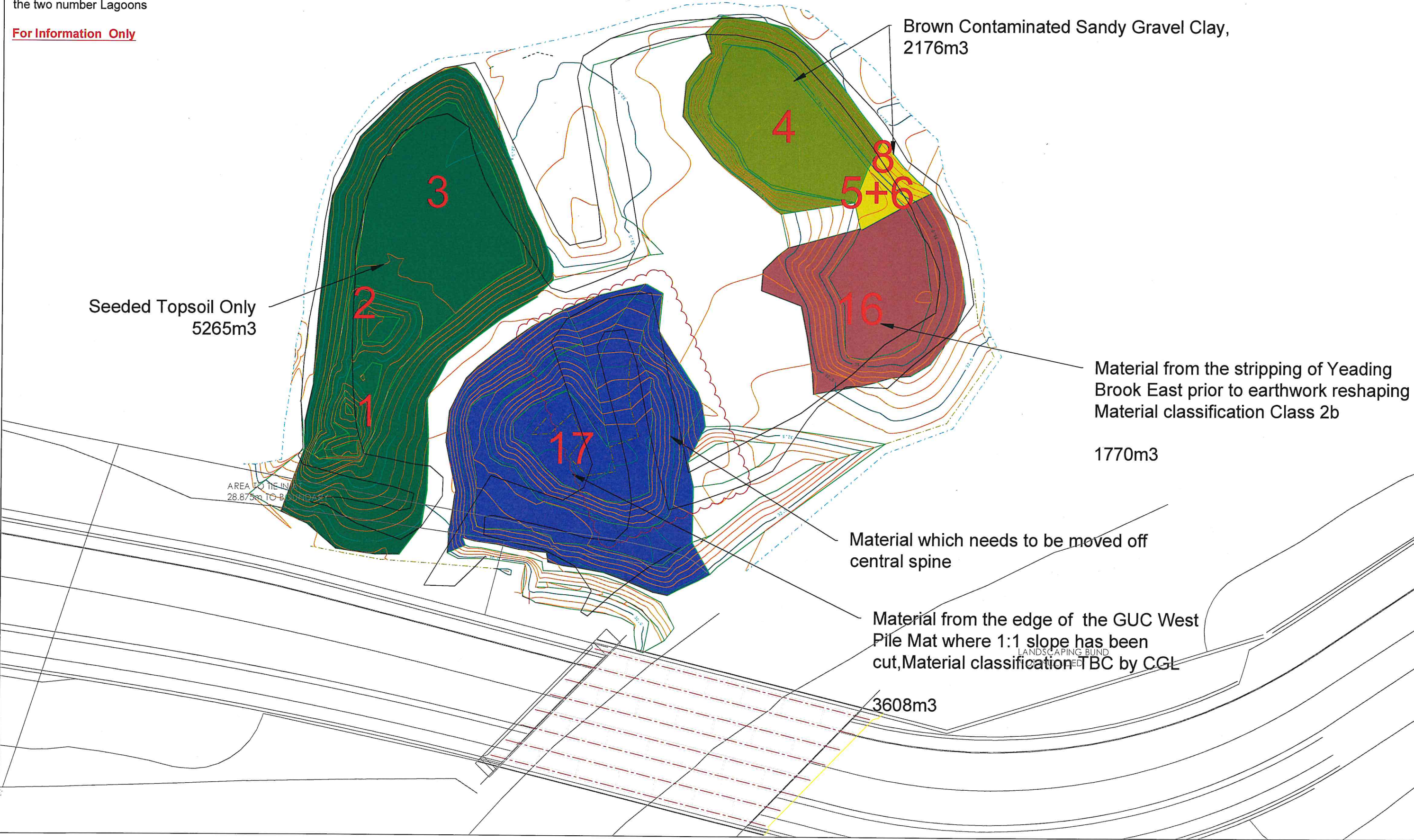


This drawing shows the location and volumes of spoil on the Lagoon area as of 15.02.2018

The classification of material has been determined by CGL but reports on material types will take preference over notes in drawing

Stockpile number 17 is to be moved at the east side due to it currently being situated on the main spine separating the two number Lagoons

For Information Only



Soil Management Strategy (FM Conway Engineering and Survey Sector) – Construction of Fill Works - Western Access
Report: FMC-SMS-WA-001-V2
Date: 07.11.2017

This strategy report is a detailed procedure of how FM Conway will construct the earthworks cut and fill works for the River Crane, Flood Attenuation Area and the construction of the Road Earthworks to the west of the Grand Union Canal.

History of the Earthworks to date and the Current Layout of The Storage Areas

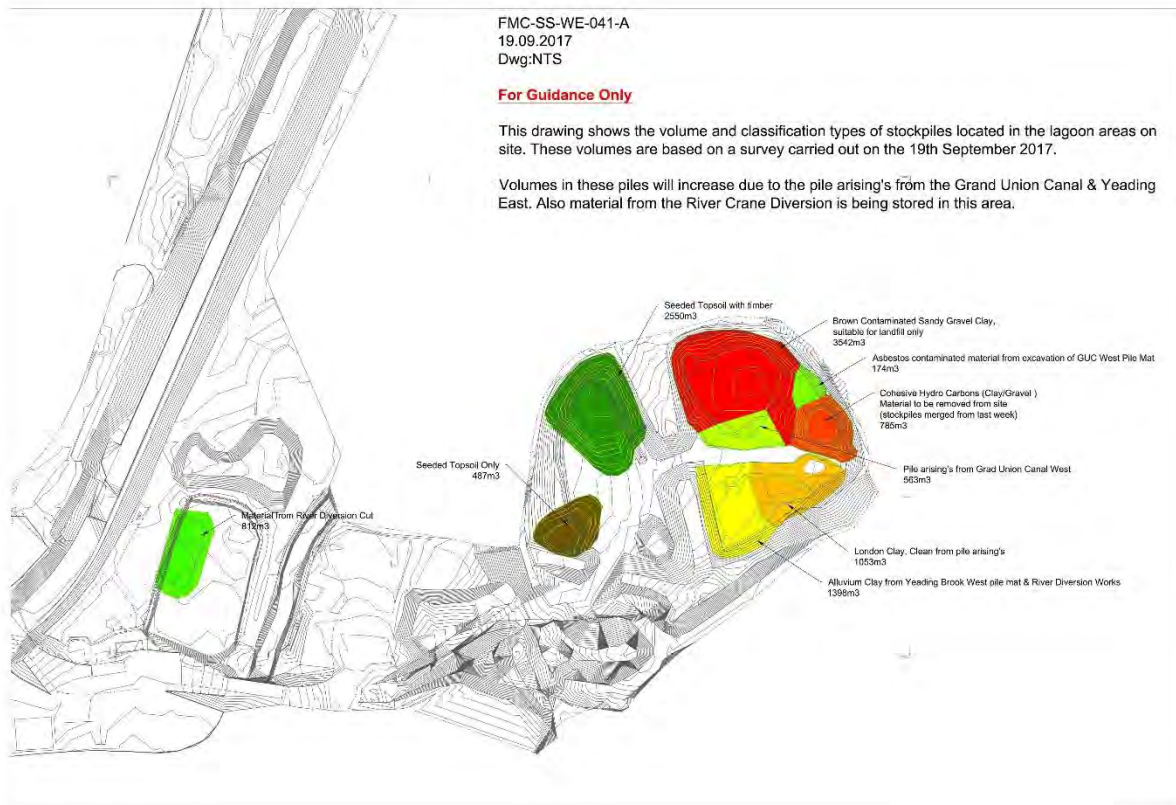
During the contract large amounts of earthworks have been undertaken from topsoil stripping to excavation of new river divisions to the moving of contaminated material. These materials have been stored in an area called the Minet Tip (also known on site as the Lagoons). These were moved here to prevent any potential contamination to the remainder of the site and the underlaying water table. Not all materials moved to this area were classed as contaminated.

Materials were stored in separate stockpiles as per CGL classification (sampling and testing undertaken) but due to the amount of material that was required to be stored these piles have become merged and overlapped. These overlaps and merges have been recorded on site via surveying periodically or as changes happened so that when the materials are to be reused their boundaries can be re-defined.

These changes have been documented on site sketches and will form the bases of preventing any material that is not suitable for use from being removed from the tip. Below show the site sketches showing how the material stockpiles have changed during the works to date.



Drawing showing the location of stockpiles as of 13th September 2017

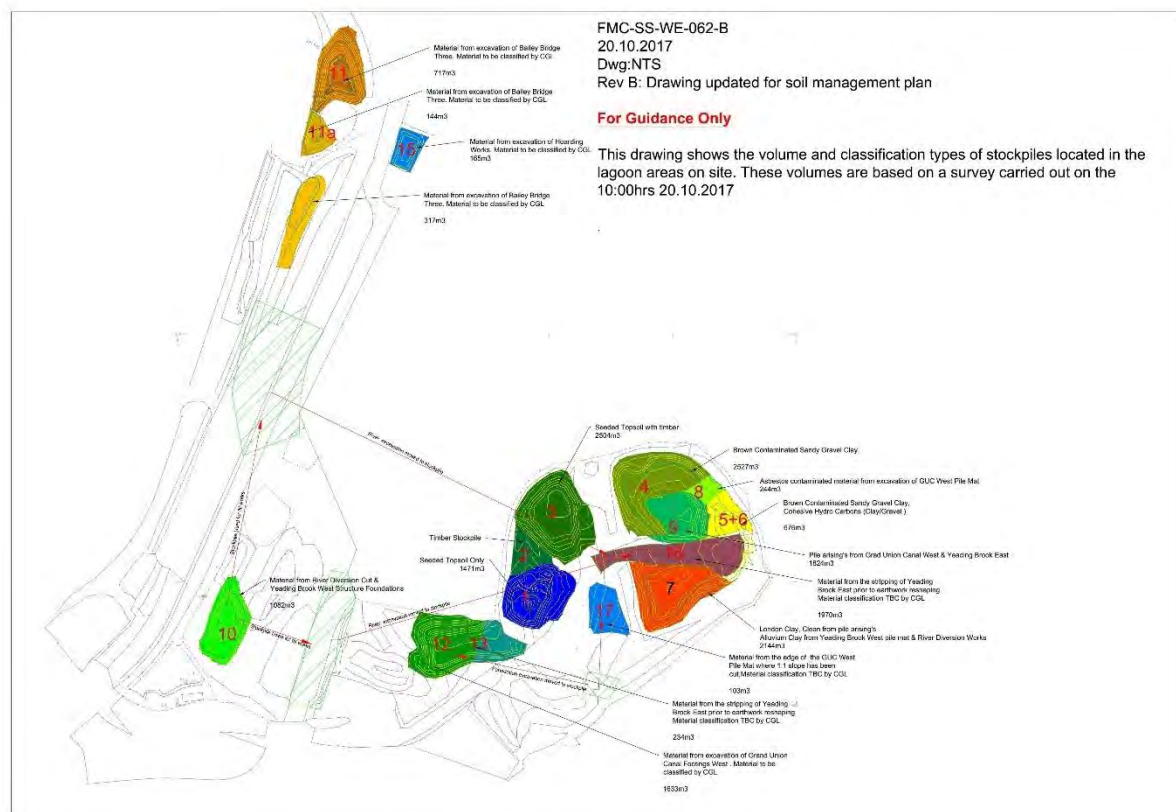
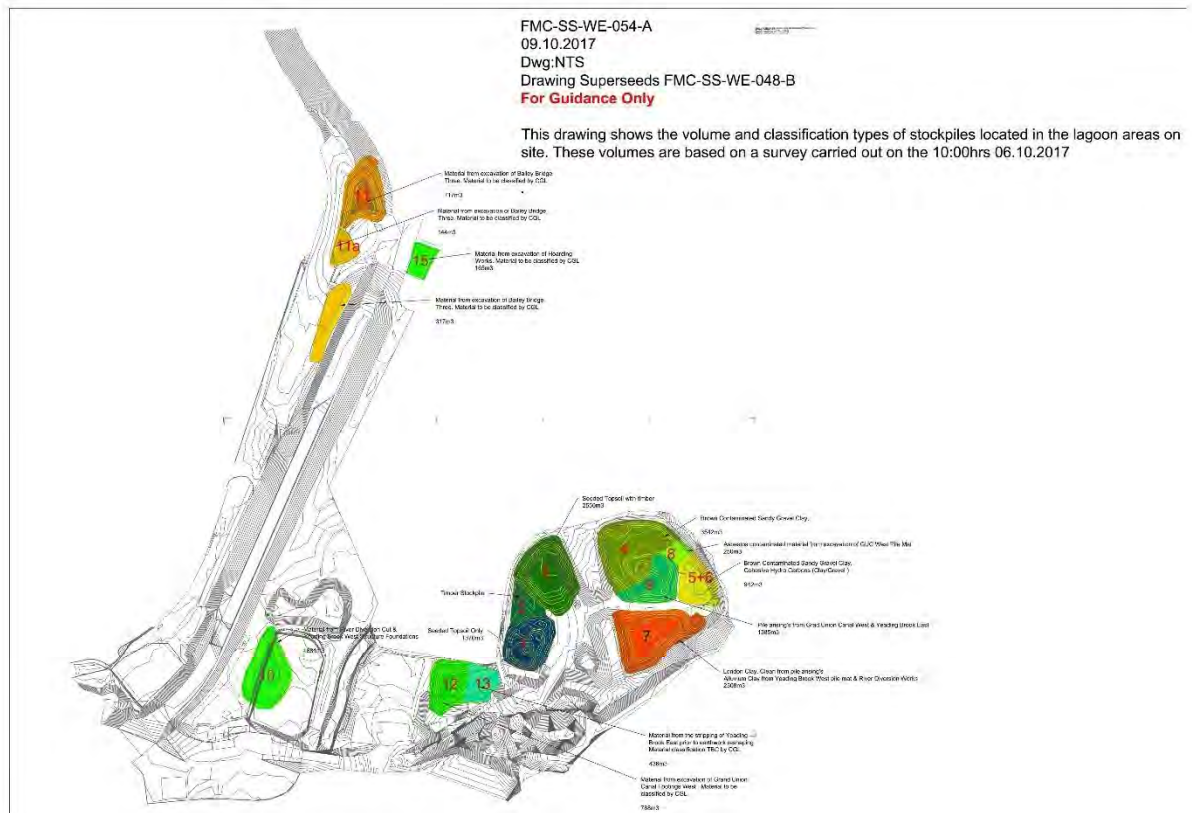


Drawing showing the location of stockpiles as of 19th September 2017. During the period of 13-19th of September the two number Hydro Carbon stockpiles where merged together, a pile of asbestos contaminated material was created from material excavated from the Grand Union Canal pile mat west and the piles arising's from the Grand Union canal placed to the south of the large stockpile of contaminated material. The pile of clean arising's to the south west increased and where placed in an area where the hydro carbon had been removed.

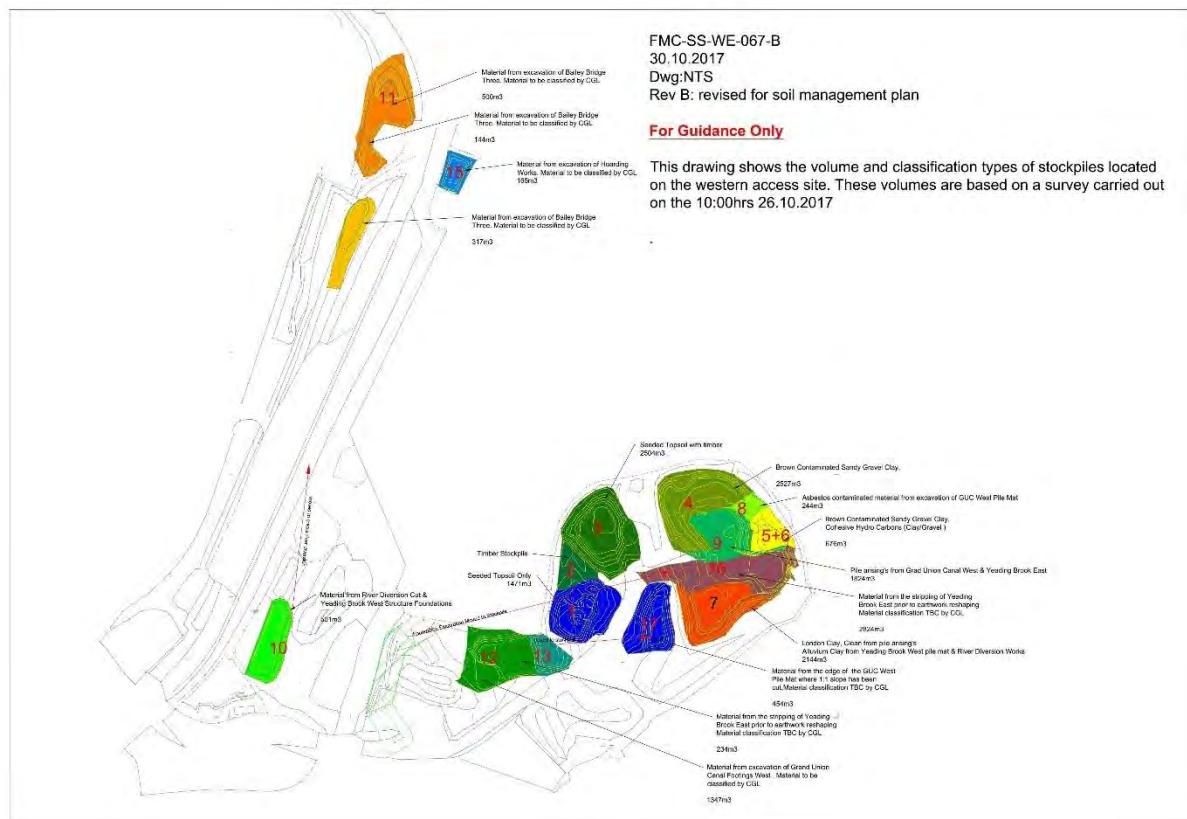
Detail only refers to changes in the lagoon area.



Drawing showing the location of stockpiles as of 28th September 2017. During the period of 19-28th of September topsoil was stripped from the site and located in stockpile number 1, stockpile number 7 was classified as one pile by CGL, stockpile number 9 was increased and there were areas to stockpiles 5-6 that were reshaped. The timber stockpile was added to the drawing
Detail only refers to changes in the lagoon area.

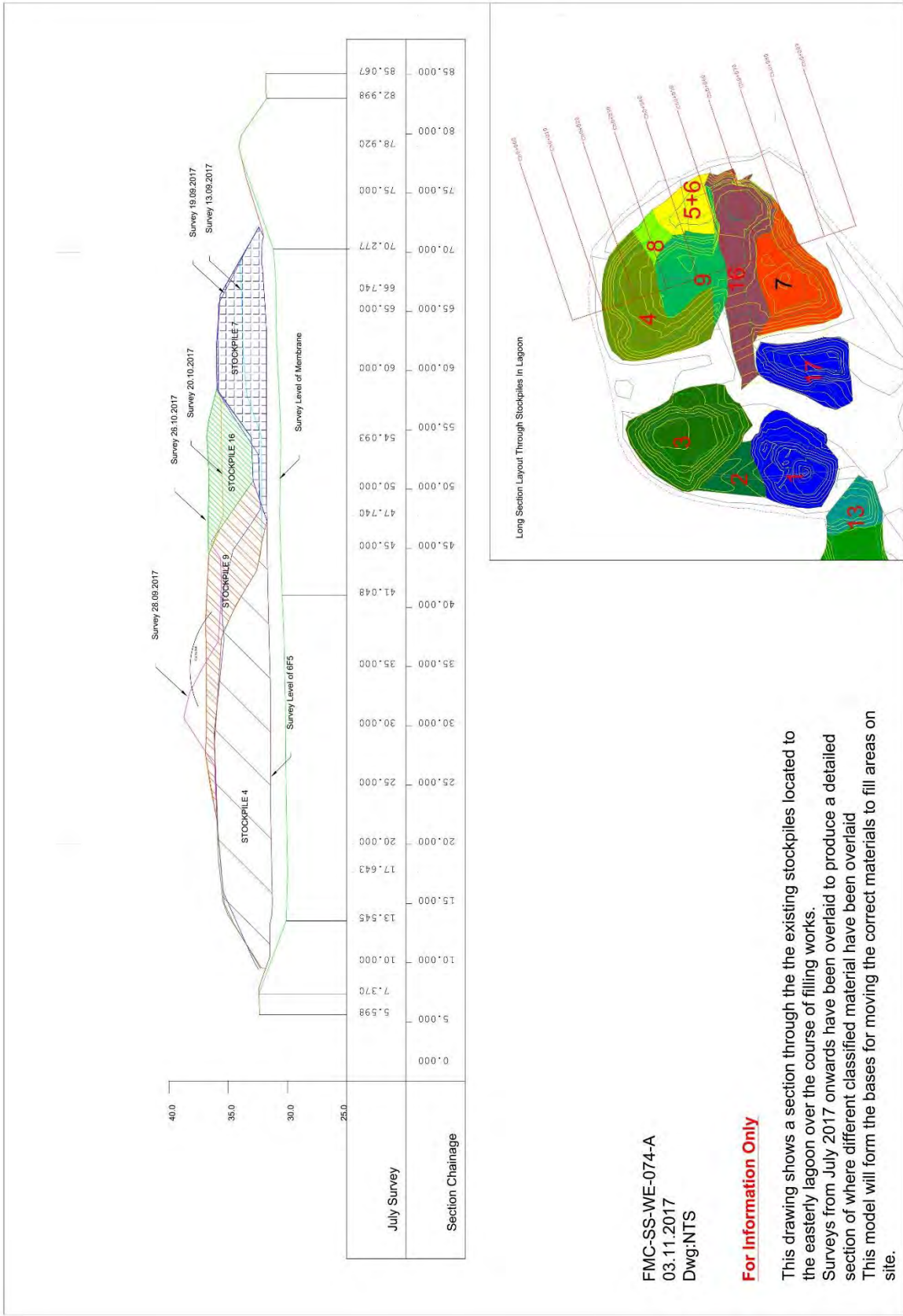


The drawing above shows the changes in stockpiles from the 6th October to 20th October. Stockpiles number 17 and 16 were created. Stockpile 17 was created from forming the embankment cutting to the Grand Union Canal west abutment, stockpile 16 was wet clay material from the excavation of the existing river crane that needed to be removed to allow for steps in the new embankment to be cut.

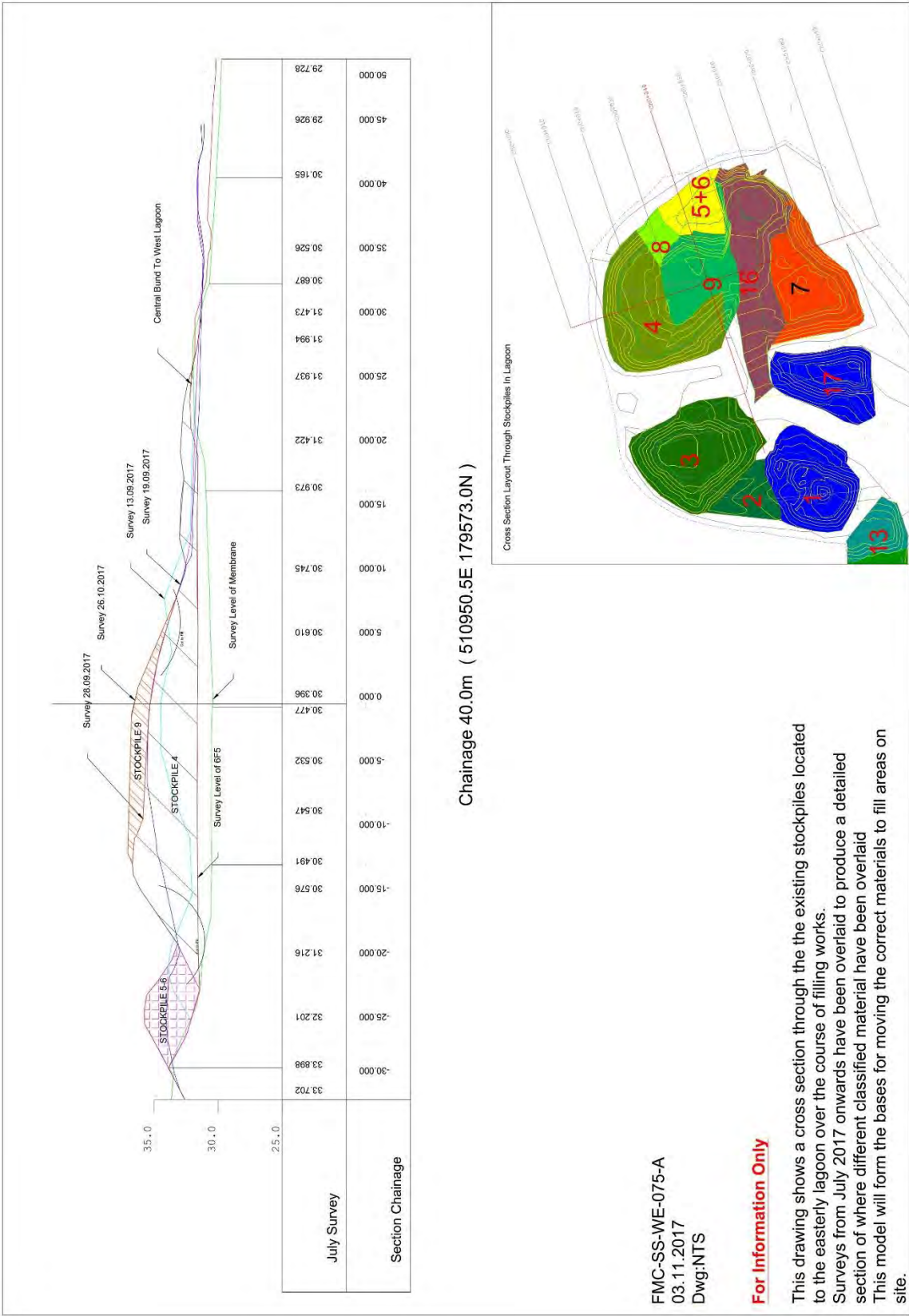


The drawing above shows the changes up the 26th of October. This shows that stockpile 12 being moved to stockpile 17.

Changes to the stockpiles that will occur prior to any permanent earthworks will be the topsoil strip from the existing river crane that will be moved to the topsoil heaps located in the lagoon (stockpile 1). The existing silt located in the channel of the river crane will remain in this location but stored further downstream in the existing concrete channel for testing and recommendations from CGL.



Long Section through the stockpiles showing the location and levels of each stockpile as the area of the lagoon was filled



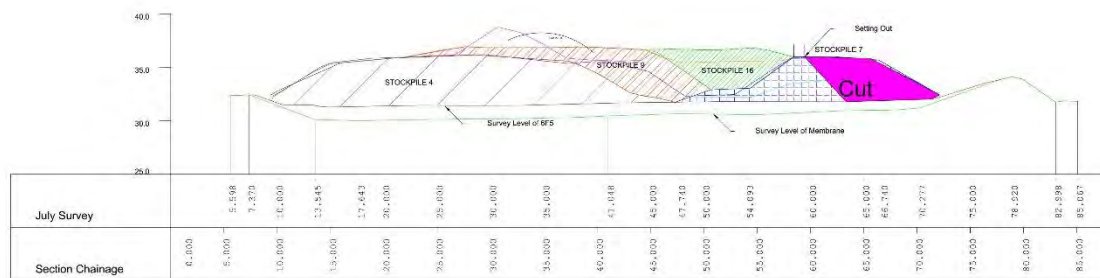
Cross Section through the stockpiles showing the location and levels of each stockpile as the area of the lagoon was filled

Method of River Crane filling works to Prevent material from lagoons that are not suitable being used in these works

The first stockpile that will be used for filling the River Crane will be Stockpile No 10 which is located on the Western edge of the Yeading Brook West Pile Mat. This material originated from the new cut of the river diversion and the excavation of the Yeading Brook West Abutment. This material has been tested and complies for fill material as per CGL documentation.

The next pile that will be used for filling the River Crane will be from Stockpile No 7 located in the second lagoon to the east. This material has been tested and is suitable for fill material.

Due to the close proximity of stockpile No16 which is awaiting test results an area will be pegged out on the top of the stockpile so that only Stockpile No 7 is moved. The location of these pegs have been calculated using the survey models and will be agreed on site by CGL prior to any works. These points will be 1m away from stockpile number 16.



FMC-SS-WE-077-A
06.11.2017
Dwg:NTS

For Setting Out Information Only

This drawing shows setting out required to Stockpile 7 prior to stockpile 16 test results

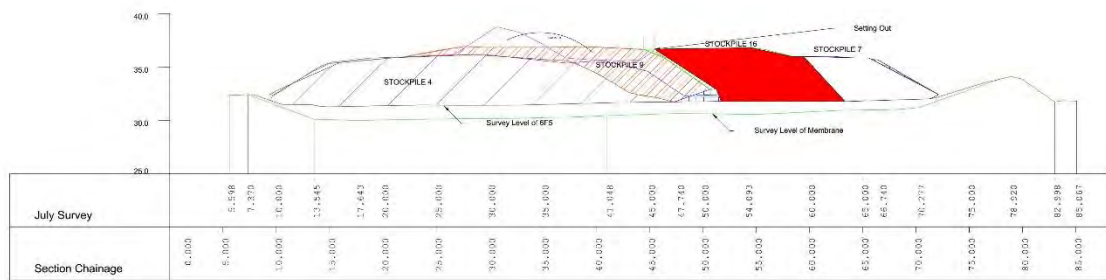
Stockpile 7 Setting Out Line Prior to Stockpile 16		
Test Results		
Point id	Eastings	Northings
SOP 1	510934.621	179549.205
SOP 2	510953.285	179554.669
SOP 3	510962.034	179554.579
SOP 4	510964.285	179550.173
SOP 5	510971.971	179547.787



Drawing showing the location of setting out for cutting stockpile 7

HOLD POINT- AWAITING TEST RESULTS FROM STOCKPILE NO 16

Subject to testing information being supplied for stockpile 16 and being suitable for filling this will be the next area that will be excavated and used as filling material. Again due to the close proximity of stockpiles in this area a cut line will be pegged out to prevent any excavation works to stockpile 9 & 5+6.

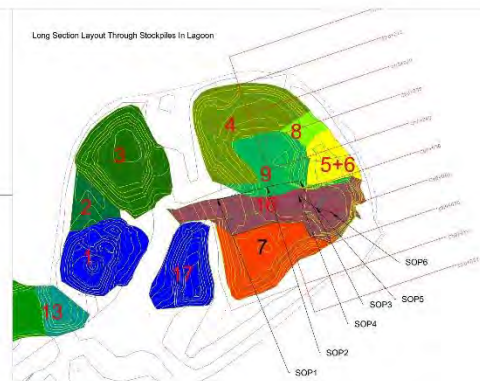


FMC-SS-WE-079-A
06.11.2017
Dwg:NTS

For Setting Out Information Only

This drawing shows setting out required to Stockpile 16 to prevent any excavation of stockpiles 9 & 5+6

Stockpile 16 Setting Out Line		
Point Id	Eastings	Northings
SOP 1	510933.924	179563.254
SOP 2	510951.815	179567.894
SOP 3	510961.562	179569.577
SOP 4	510961.480	179564.457
SOP 5	510966.750	179560.539
SOP 6	510972.109	179556.801



Drawing showing the location for setting out of cutting stockpile 16