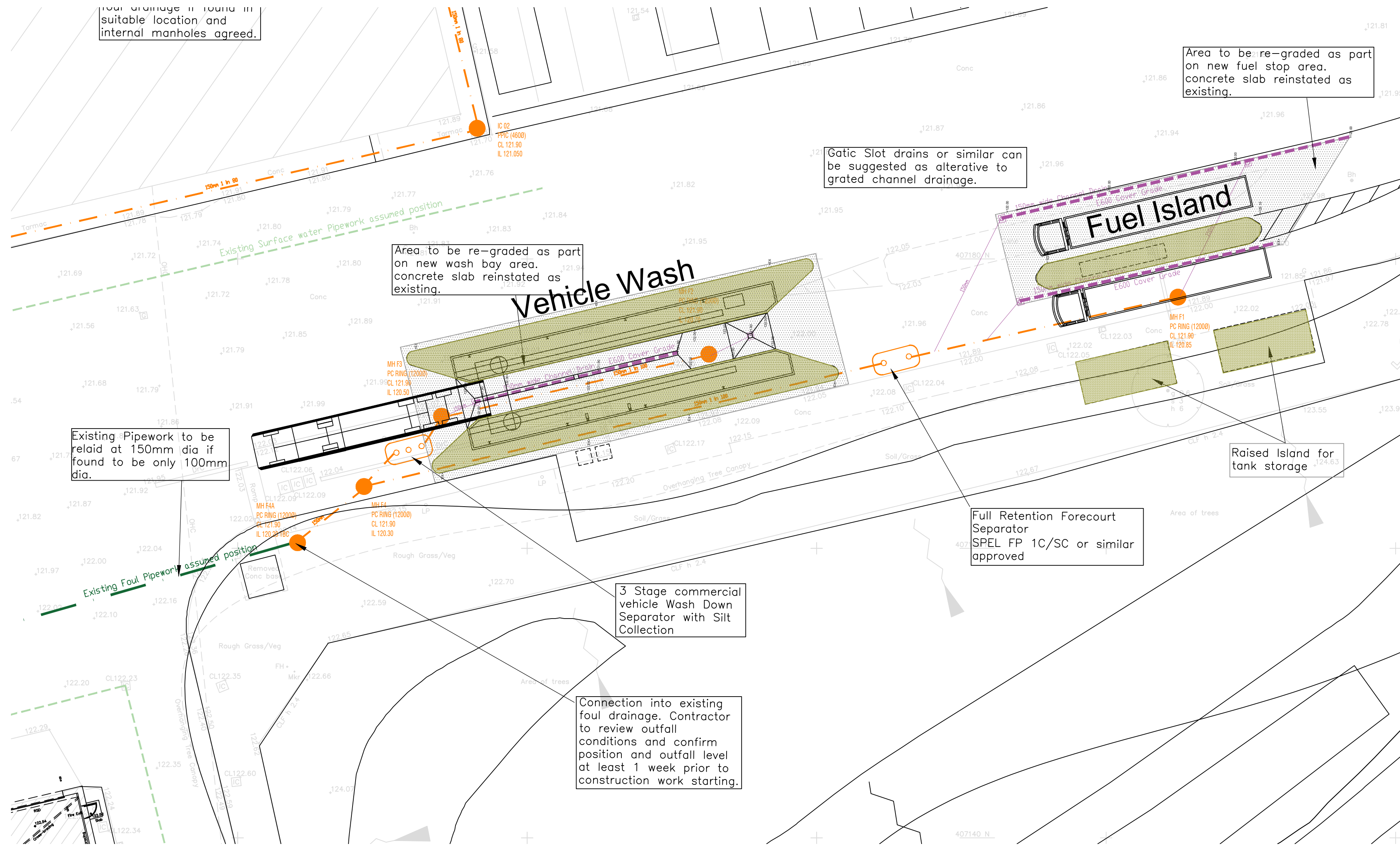




Key.

- FI (1200)
CL 130.00
L 130.00
- Proposed foul sewer (invert level shown)
- 600/460/225 "non-accessible" inspection chambers
Minimum 1200/0 "accessible" manholes
- Proposed channel drainage system - hauraton
faserfix super or similar approved. 150mm wide.
provided with associated trash box and outlet
- Existing drain - to remain - foul water
- Existing drain - to remain - surface water
- Existing sewers to be diverted/made redundant
/built over
- separator unit.
oil, grease or washdown

Note: All Treatment/Pumps/Separator units noted are for indicative costing purposes only. Full detailed design specification to be obtained from the manufacturers prior to any orders being placed.

Proposed site levels
Proposed Gradients

Levels provided are indicative only to assist with completion of drainage design works. precise level design to be completed at detailed design stage.

Yard Reinstatement construction

- Surface course 200mm thick concrete slab mix re. RC30 in accordance with BS 5328 reinforced with 1 layer of BS ref. A393 mesh fabric in top face, min. cover 40mm, on polythene sheet 125 micrometres, with 300mm laps.
- Sub base 200mm minimum sand blinded Type 1 GSB compacted in Sub base accordance with D.O.T. Specification for Highway Works.
- Capping min 120mm thick Granular material Class 6F2 in accordance with capping DTp Specification for Highway Works table 6/1 - 6F2 formed from recycled material.

Raised Islands construction

- Surface course 200mm thick concrete slab mix re. RC30 in accordance with BS 5328 reinforced with 1 layer of BS ref. A393 mesh fabric in top face, min. cover 40mm, on polythene sheet 125 micrometres, with 300mm laps.
- Sub base 200mm minimum sand blinded Type 1 GSB compacted in Sub base accordance with D.O.T. Specification for Highway Works.
- Capping min 120mm thick Granular material Class 6F2 in accordance with capping DTp Specification for Highway Works table 6/1 - 6F2 formed from recycled material.

Plinth/Island construction to be surrounded by tref kerb and finished with a non slip painted surface finish.

General Notes

Do not scale this drawing. If in doubt, consult with the Engineer

- This drawing is to be read in conjunction with all other relevant Engineers, Architects and Specialist design drawings and specifications.
- All dimensions and levels are in metres unless noted otherwise.
- This drawing is for information purposes and all information displayed is subject to detailed design.
- Cover levels noted are indicative or best design levels. constructed levels should take into account as-built surfacing levels and gradients.
- The Contractor shall be responsible for checking all tie-ins for line and level with existing foul and surface water systems before commencing any works.
- The Engineer shall be notified immediately, in writing, should any errors or discrepancies be found prior to the commencement or continuation of any works. All work is to be carried out in accordance with current British Standards, Building Regulations and NHBC Standards.
- All drainage work is to be strictly in accordance with the requirements of the Building Regulations 2010, Approved Document Part H, "Drainage and waste disposal".
- It is the responsibility of the Contractor to execute the works at all times in strict accordance with the requirements of the Health and Safety at Work Act 1974, and the C.D.M. Regulations 2015. The Contractor will be deemed to have allowed for full compliance, including full liaison with the Principle Contractor, within his rates.
- All existing land drains encountered on site during construction are to be re-connected.
- Should any departure from the proposed slab or external levels be considered, agreement shall be sought from the Engineer immediately and prior to the commencement or continuation of any works. Proposals should take full account of all restrictions to the slab level.
- Temporary protection to be provided to drainage work during construction as necessary.
- Power supply to separator/treatment units, alarm, panel, vent etc to be provided by contractor in accordance with manufacturers recommendations.
- Topographical survey shown is based upon Hollis drawing 119831-10100
- Architects layout shown is based upon Architects layout drawing UMC Site layout drawing. This layout may be subject to change and is intended for indicative purposes only.

Specification Notes

- The following types of pipe may be used unless noted or agreed otherwise;

- Pipes up to 300mm diameter to be Structured Wall to BS EN 13478, Polypropylene to BS EN 1852 or PVC-U to BS EN 14011.
- Pipes 300mm diameter or over to be Concrete to BS 5911.

- Both Clay and Concrete pipes shall be strength class 120 (100/150mm min crushing strength 28kN/m). Thermoplastic pipes shall have a minimum ring stiffness of SM4.
- Pipes which run adjacent to buildings shall be installed in strict accordance with Part H, Clauses 2.23 to 2.25.

- All pipes, chambers and fittings shall be installed, bedded and backfilled in accordance with the manufacturers instructions subject to the following minimum requirements;

Pipe Location	Cover to crown	Clay/Concrete Pipe * Bedding	Plastic Pipe Bedding	Backfill
Roads (HGV)	>1.2m	Class S	Class S (S1or2)	Type 1 Granular
Drives / car parking	>0.9m	Class 'A' (Concrete)	Class 'A' (Concrete)	Type 1 Granular
Hard and soft Landscaping	>0.6m	Class S	Class S (S1or2)	Suitable as dug material

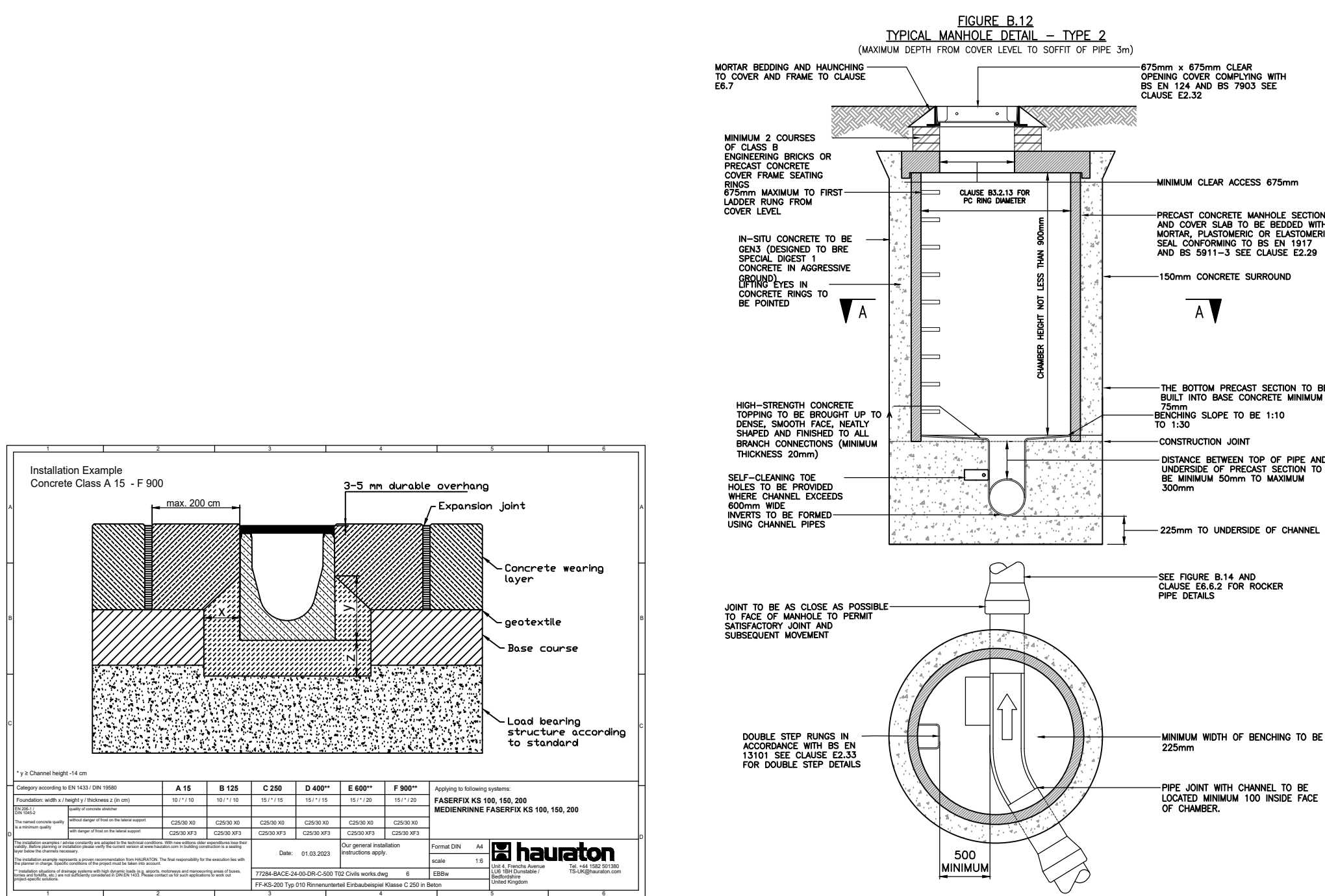
- The first flexible joint in pipes adjoining a manhole shall be a maximum length of 600mm from the inside face of the manhole, connecting to a rocker pipe. The length of the rocker pipe shall be as follows;

Pipe diameter	Length of Rocker pipe
150-600mm	600mm
675-750mm	1000mm
over 750mm	1250mm

- All manholes and inspection chambers situated in areas subject to vehicular loading to have class D400 covers and frames to BS EN 124 and those not subject to vehicular loading to have class minimum class B125 covers and frames.
- Drainage frames must be tied to manhole risers by use of manufacturers ties (eg. Polypipe ref FRK500 fixing kit and FRK501 black ties.) The ground works contractor will be held fully responsible for any accidents due to incorrect fitting or failure to use the correct manufacturers fixing equipment.
- All drains in the vicinity of existing or proposed trees to be constructed in accordance with the requirements of NHBC Practice Note 3.

Levels provided are indicative only to assist with completion of drainage design works. precise level design to be completed at detailed design stage.

Design information issued for D+B tendering purposes only
Contractors to allow for full detailed design requirements



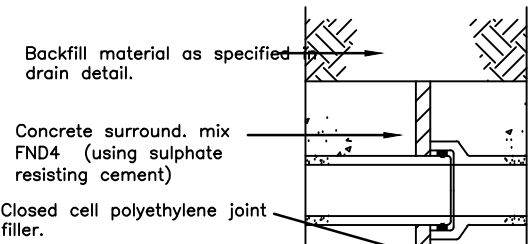
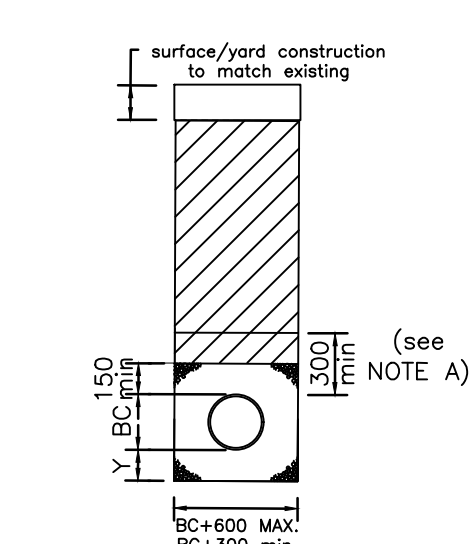
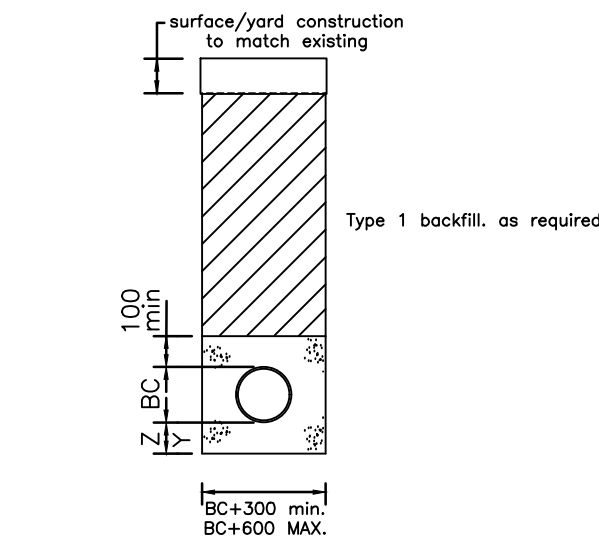
- Granular material (see table below)
- Granular type 1 material deposited in layers not exceeding 225mm unconsolidated thickness and then fully compacted.
- Grade FND4 Concrete (20mm aggregate)

KEY	Outside diameter of pipe
BC	BC/6 or 100mm under barrels and 50mm min. under sockets whichever is greater (400mm max.)
Y	BC/4 or 200mm under barrels and 150mm min. under sockets whichever is greater (400mm max.) for trenches in hard material.
Z	BC/4 or 100mm under barrels whichever is greater.

GRANULAR MATERIAL	AGGREGATE
100mm	10mm single size
150mm	10mm or 14mm single size or 5-20mm graded.
225-525mm	10mm or 14mm single size or 5-20mm graded.
over 525mm	10, 14, 20 or 40mm single size or 5-40mm graded.

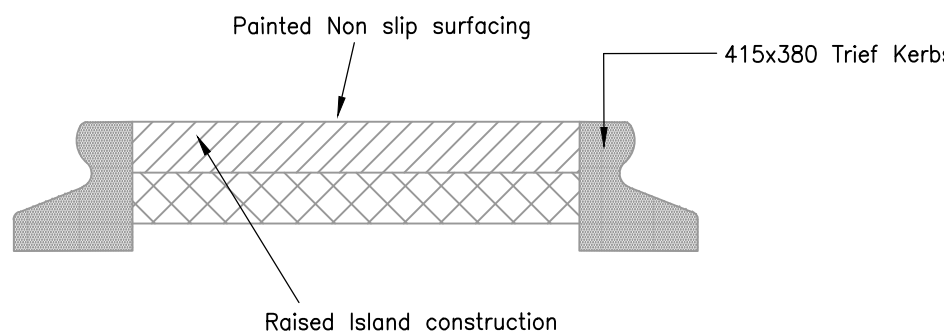
NOTE A
No mechanical compaction within 300mm of crown of pipe.

PIPE BEDDING & PIPE TRENCH DETAILS



- NOTES
- Joint filler thickness: up to 300mm dia pipe, 25mm, up to 600mm dia pipe, 40mm.
 - Provide joint in concrete surround at every pipe joint or 5m centres whichever is greater.
 - The joint filler shall extend across the full area of the concrete and there is to be no bridge of concrete across the joint.

FLEXIBLE JOINT DETAIL FOR BED TYPE 2



Typical Section thro. Raised Island areas
Fuel Island and vehicle wash areas

FOR GUIDANCE ONLY

Rev.	Revision Description	Drn	Date
T01	Tender issue	BD	08.07.24
T02	amended to suit latest site layout	BD	15.07.24

Do Not Scale this Drawing if in Doubt Ask
Do No Derive Dimensions from Digital Media

Client:	GXO LOGISTICS LTD
Drawing Type:	AutoCAD
Title:	STAKENILL IND EST, MIDDLETON, MANCHESTER, M73 3SX BELOW GROUND DRAINAGE - VEHICLE WASH + FUEL STOP

Scales:
1:200 @A1

Date:
JUN 24

Drawn by:
BD

Checked by:
SW

Suitability:
APPROVAL/TENDER
Index No.:
IDS-2024-000

Drawing No.:
MIDDLETON-IDS-702-DR-A-00-10-020

Revision
T02



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