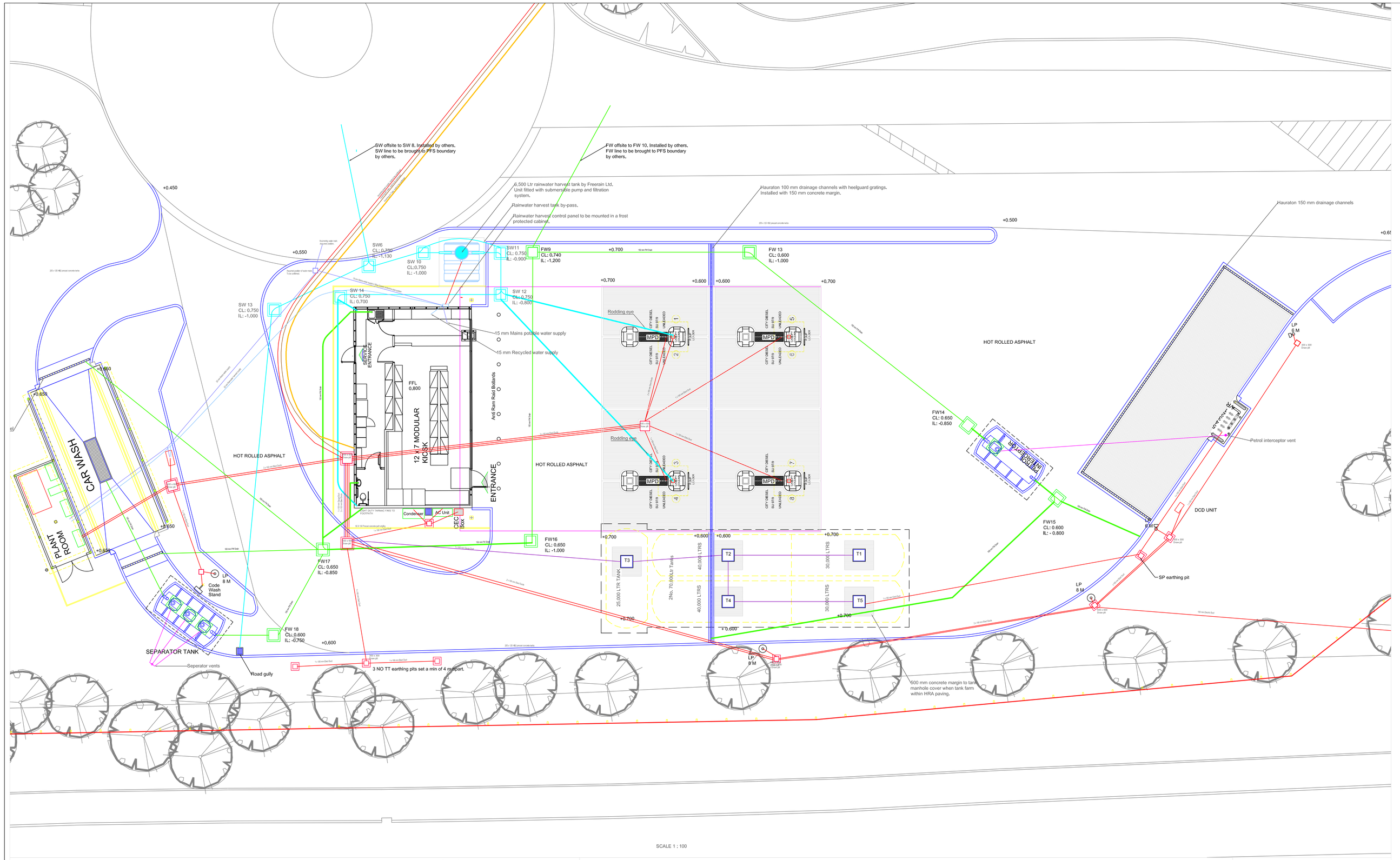
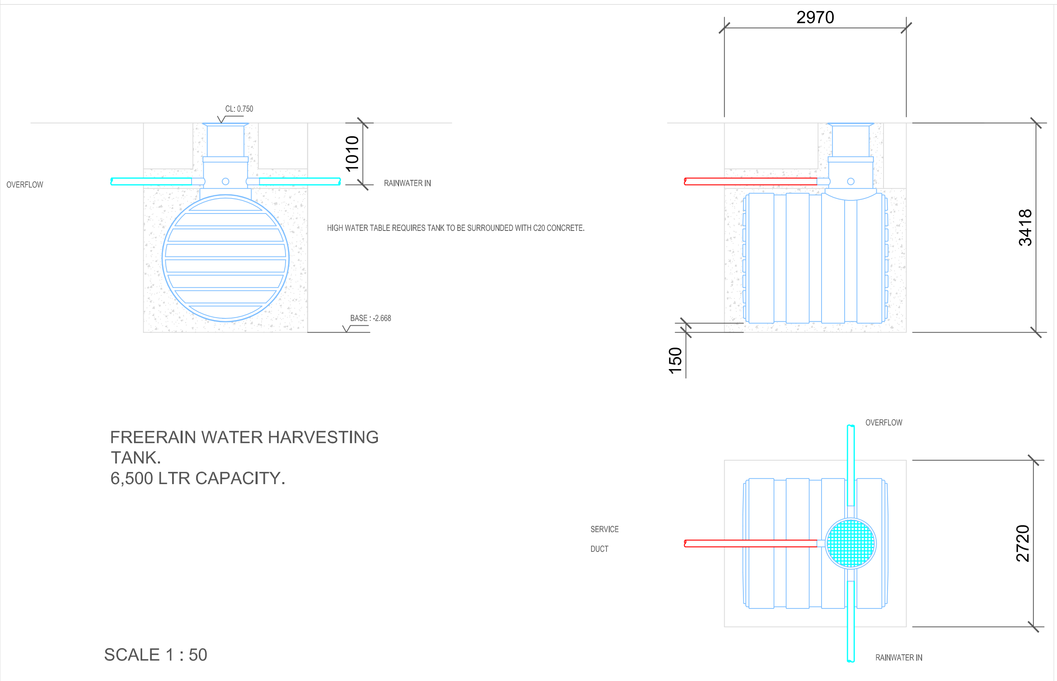
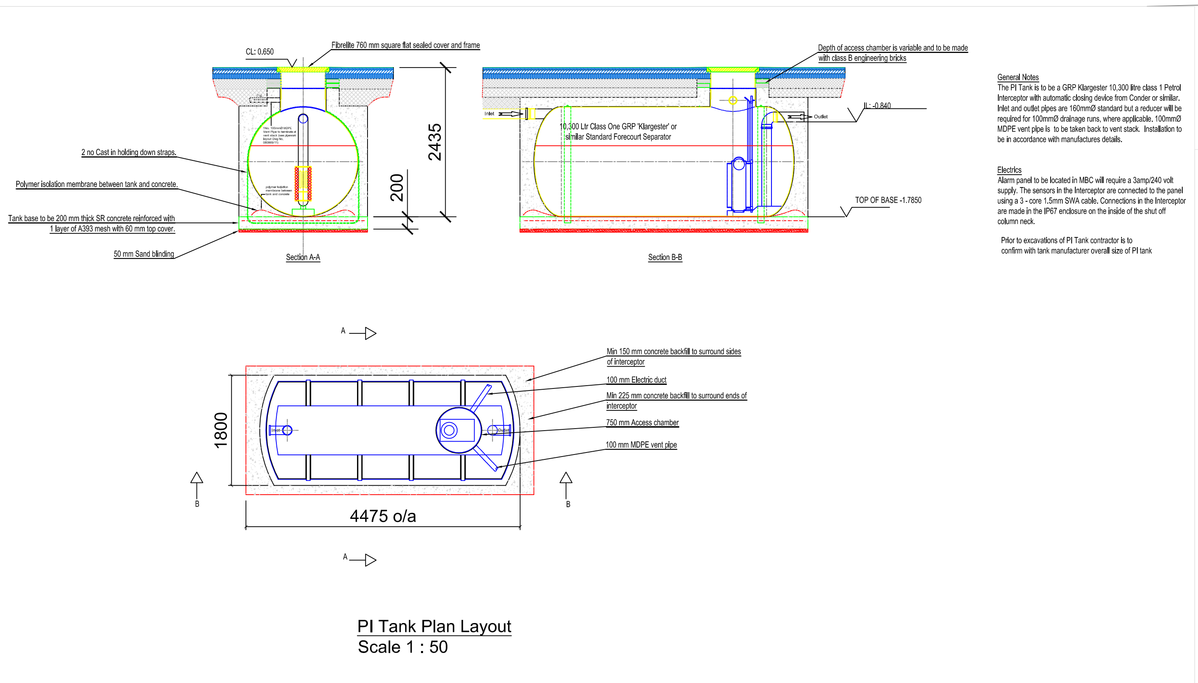


SCALE 1 : 100



FREERAIN WATER HARVESTING TANK.
6,500 LTR CAPACITY.

SCALE 1 : 50



PI Tank Plan Layout
Scale 1 : 50

General Notes
The PI Tank is to be a GRP Kargester 10,300 litre class 1 Petrol Interceptor with automatic closing device from Condor or similar. Inlet and outlet pipes are 160mmØ standard but a reducer will be required for 100mmØ drainage runs, where applicable. 100mmØ MDPE vent pipe to to be taken back to vent stack. Installation to be in accordance with manufactures details.

Electrics
Alarm panel to be located in MBC will require a 3amp/240 volt supply. The sensors in the Interceptor are connected to the panel using a 3 – core 1.5mm SWA cable. Connections in the Interceptor are made in the IP67 enclosure on the inside of the shut off column neck.

Prior to excavations of PI Tank contractor is to confirm with tank manufacturer overall size of PI tank

GENERAL NOTES

Kiosk:
Sales Kiosk supplied and installed by Specialist, onto prepared concrete foundation. Air Tube from main store Cash Office to be installed into the Control Area by specialist to designated position. Customer Emergency Cabinet system installed as Tesco specification in shown location.

External Works:

Note
Site has a very high ground water level and it may prove necessary to undertake dewatering proceedures on all deep excavations. Granular sub base and fill material must be contained within Terram geotextille membrane to prevent migration.

Concrete Forecourt areas:
175mm Thk Concrete Forecourt, with Tanker Stand Bay & Tank Farm area formed using 175mm thick air entrained C40 concrete with a brushed finish, 90 degrees to traffic flow, including B283 mesh in top, with 50mm cover, on Visqueen D.P.M. (300microns thick), on 150mm thick capping layer (6F1/6F2), on DOT Type 1 subbase 150mm thick on level, compacted surface with all soft spots removed, see engineers details for more information. Layer of Terram geotextille membrane to be laid below capping layer to prevent migration of granular fill.

Hot Rolled Asphalt Forecourt areas:
HEAVY DUTY USE
40mm Hot rolled asphalt wearing course
60mm Dense base course macadam
90mm Dense road base macadam
225mm MOT type 1 sub base
150mm Capping layer (6F1/6F2)
on level compacted surface with all soft spots removed, see engineers details for more information.

PEDESTRIAN FOOTWAY USE
20mm Fine texture bitumen macadam wearing course
50mm Dense bitumen macadam base course
100mm MOT Type 1 sub base
100mm Capping layer 6F2

Road Paint markings - hot applied thermoplastic screed to BS3262 1989, Class A, applied to clean dry surface.

AirWater units to be installed as Tesco Standard.

Tank Installation
To comprise of 2No 70,000Ltrs and 1 no 25,000 ltr double skinned steel storage vessels to be arranged as shown, secured to a 275mm thick sulphate resistant situ concrete C40 base, reinforced with 1No layer of A393 mesh, as engineers details, Tank vault is to be terram lined prior to pouring base to completely envelope excavation. Tank vessels are to be fully encased in pea shingle.
Tank installation will require a cofferdam system and dewatering to control ground water during installation. Design for this to be provided by Structural Engineer.

Monitoring Wells
Allow for 2No. monitoring wells placed within tank farm approx. 5000mm deep lined with a perforated steel liner and terminated with a screw down cast iron cover and frame.

Forecourt Canopy

Canopy to Tesco Standard. Site specific details from Highcross Forecourt Canopies Ltd.

Pump Islands
Form 4No. 'dog bone' shaped pump islands, see Tesco standard pump island layout for further details, islands comprising of 125x255mm PC kerbs, infilled with 30N/mm situ concrete with 1No. layer of A252 mesh. Islands finished in selected tiles. Islands to be set in concrete forecourt with isolation margin.

Flood Lighting
Flood lighting in accordance with Abacus drawing LS17256 rev 2

Signage
In accordance with BlueNine Ltd Design Document Rev 1A.

DRAINAGE & SERVICES NOTES

DRAINAGE:

Horiton Drainage Channels to be Tesco standard

4No. RWO's to canopy columns by specialist to be connected to new 100mmØ Surface Water drain. Rodding access to head of each drain run sealed with screw down sealing plate.

All drainage to have 100mm thk insitu concrete surround to protect against ground water uplift..

Drainage details as Pinnacle Consulting Engineers drawing 225.

Only tanker standing & forecourt dispensing surface areas are to have their surface water passed through the Foul Water Petrol Interceptor PIMH1, a Klargester 10,300 litre working capacity Class 1 single stage petrol interceptor with float and coalescing filter and alarm as manufacturers details, to discharged into FWMH1. Interceptor alarm to be wired and located within Kiosk Building, see Tesco Standard Kiosk Building drawings for position. Comprising excavation for Pit to required depth and casting 200mm thick situ concrete base reinforced with 1No layer of A393 mesh with min 60mm top cover. Unit is to be strapped to base and encased in min 150mm thick concrete with progressively charging with water as encasement proceeds. Interceptor to have 100mmØ MDPE vent pipe installed as Illustrated with galvanised steel risers fitted by pipefitting contractor.

All gullies shown are to be standard road gully type complete with lift out silt bucket and cast iron grating.

Manhole cover levels stated are interpolated levels from proposed forecourt levels and are to be used as a guide only. Actual cover levels to be to suit forecourt levels and falls at construction. All drainage to be Hepsleeve or similar approved set to min. falls i.e 100mmØ Foul Water 1:40 & 1:60 for Surface Water drains, with 150mmØ drains set at 1:150 for both Foul Water & Surface Water or as detailed.

All Manholes to be constructed as noted which will be either:
Class 'B' engineering brickwork 215mm thick built off 150mm concrete base all sized to suit depth and connections (step irons if required) All in accordance with specification and BS 8301 : 1995.
or;
Manholes over 1000mm in depth are to be formed off 150mm situ concrete base with 1050mmØ spun concrete ring manhole chambers with 150mm grade 30 concrete encasement.
Step irons incorporated. Manhole covers and frames to suit location.

All drainage is to be in accordance with current Building Regulations and to the satisfaction of the Local Building Control including final inspection and testing. All forecourt drainage channels to be as specification to suit location about site and potential loading set in concrete margin and on suitable concrete base and margins as manufacturer's details including all expansion joints etc. applicable. New whb's and sink etc to be connected into sealed BIG via 75mm deep resealing traps and 38mmØ UPVC pipe runs with access provided at change of direction.

WATER:
25mmØ Protectaline Incoming mains water or similar in 100mm duct, teed at 600x600mm water chamber, with 15mmØ Protectaline water supply to Freerain control panel.
28 mm Protectaline from the water chamber to the carwash and teed to provide for Air Water unit.
Recyloed supply to toilet flush, Air water unit and carwash.
All water pipes are to be buried 750mm deep with pipework direct buried in landscaped areas and ducted in trafficked areas, with 100mm clean sand bed and surround. SHOP WATER SUPPLY IS TO BE VIA A 'PROTECTALINE' OR SIMILAR SYSTEM.

Ducting
All ducting to be UPVC HepDuct or similar as shown with 'nitrile rubber' waterproof sleeve couplings to achieve ductwork scheme indicated on layout.

Include for all bends, junctions etc. together with continuous nylon draw rope to individual ducts with min. 6kN breaking load. Upon completion of the works it is the responsibility of the General Contractor to ensure draw rope is in place throughout the development.

Duct network to be min. 750mm below finished levels (deeper where required to forecourt area) set with min 100mm thick compacted granular bed & surround with terram lining as applicable. Allow for all excavations to form trenches including any earthwork support and cart away. Following duct and surround installation allow for backfilling with imported 19mm> graded & crushed stone in compacted layers as site fill.

Include for termination of ducts to dispenser drip trays including 90° bends. All terminations to Building slab as specific details. Incoming mains power to shop is to be direct buried.

At base of all floodlights and other apparatus to duct system include for formation of 300x300mm access draw pit chamber as above.

Chambers
Draw pit chambers to be sized as shown but generally comprise 600x600mm/300x300mm 215mm class B engineering brickwork chamber on 150mm thick 25N/mm situ concrete base and selected cover and frame over.
Chambers within trafficked areas to be backed up with 150mm situ concrete as base.

Upon completion of all works and wiring by all parties General Contractor to allow for sealing all duct ends with mineral wool and expanding foam. Chamber to be filled with a dry sand and finished over with 25mm sand/cement screed. Allow for denoting within screed ELECTRICS.

PIPEWORK
All pipework installed in accordance with APEA/P Design, Construction, Modification and Decommissioning of Filling Stations (2nd Edition).

All pipework to be laid with a 1:100 fall back to the tanks. Care to be taken to avoid any low points leading to possible liquid locks.

All threads to be sealed using Loktite 577 thread sealing compound used in accordance with manufacturers instruction. Heldite and Litharge / glycerine are not to be used.

Stage 2 vapour recovery return line to be installed on all sites even if pumps are fitted with self contained Stage 2 VR.

Suctions	50 mm Durapipe
Fills	110 mm Durapipe
Vents	63 mm Durapipe
Vapour Return	90 mm Durapipe
Stage 2 Vapour Return	63 mm Durapipe

Balance line to be installed from vents to the largest unleaded tank.

DISPENSERS
Dispensers 6 hose Petrotec 4500 MPD with built in Stage 2 Vapour Recovery systems. By Specialist Supplier.

GAUGE OPW Galaxy system by Specialist Supplier.

Vent vapour system supplied by Petroman.

FOUL WATER MANHOLE SCHEDULE

MANHOLE REF NO	COVER LEVEL	INVERT LEVEL	DEPTH	CONSTRUCTION NOTES
FW 9	+0.740	+1.200	1.940	1200 MM DIA SPUN CONCRETE, MANHOLE NOTED ON PINNACLE DWG NO.201.REV.02
FW 13	+0.600	-1.000	1.600	1050 MM DIA SPUN CONCRETE
FW14	+0.650	-0.850	1.500	1050 MM DIA SPUN CONCRETE
FW 15	+0.600	-0.800	1.400	1050 MM DIA SPUN CONCRETE
FW 16	+0.650	-1.000	1.650	1050 MM DIA SPUN CONCRETE
FW 17	+0.650	-0.850	1.500	1050 MM DIA SPUN CONCRETE
FW 18	+0.600	-0.750	1.350	1050 MM DIA SPUN CONCRETE

SURFACE WATER MANHOLE SCHEDULE

MANHOLE REF NO	COVER LEVEL	INVERT LEVEL	DEPTH	CONSTRUCTION NOTES
SW 6	+0.750	+1.130	1.880	1200 MM DIA SPUN CONCRETE, MANHOLE NOTED ON PINNACLE DWG NO.201.REV.02
SW 10	+0.750	+1.010	1.760	1050 MM DIA SPUN CONCRETE
SW 11	+0.750	-0.900	1.650	1050 MM DIA SPUN CONCRETE
SW 12	+.0750	-0.800	1.550	1050 MM DIA SPUN CONCRETE
SW 13	+0.650	-1.000	1.650	1050 MM DIA SPUN CONCRETE
SW 14	+0.750	-0.600	1.350	1050 MM DIA SPUN CONCRETE

DRAINAGE COVER LEVELS TO SUIT PAVING REQUIREMENTS

REV	DATE	COMMENTS

TESCO

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Defining customer experience

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SITE LOCATION	THE BILL, ST MARY'S RD RAMSEY
TITLE	SERVICES LAYOUT
DRAWING NO.	SERVICE LAYOUT/01
DATE	JULY 2009
SCALE	VARIES
DRAWN BY	CWA