

Notes

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- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTS, ENGINEERS AND SPECIALISTS DRAWINGS TOGETHER WITH THE APPROPRIATE SPECIFICATION.
- ALL DIMENSIONS ARE IN MILLIMETRES UNO, FOR THE PURPOSES OF CONSTRUCTION THIS DRAWING MUST NOT BE SCALED AND ONLY WRITTEN DIMENSIONS USED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION AND ANY DISCREPANCIES TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER IN WRITING.
- ALL LEVELS ARE IN METRES UNO & TO OS DATUM.
- THE WORKS SHALL BE IN ACCORDANCE WITH THE NATIONAL BUILDING SPECIFICATION.
- THE LOCATION LINE & LEVEL OF ALL KNOWN EXISTING DRAINAGE PIPEWORK INDICATED ON THE DRAWINGS ARE APPROXIMATE AND FOR GUIDANCE PURPOSES ONLY.
- CONNECTION TO THE EXISTING PUBLIC SEWERS WILL BE SUBJECT TO THE RELEVANT APPROVALS FROM THE STATUTORY UNDERTAKER.
- IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE THEIR EXACT LINE AND LEVEL, BY WAY OF HAND EXCAVATED TRIAL PITS, PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION WORKS ON SITE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS AND MAINTAIN THE STRUCTURAL INTEGRITY OF ALL ABOVE AND BELOW GROUND SERVICE INSTALLATIONS.
- THE CONTRACTOR SHALL MAKE ADEQUATE PROVISION FOR DEALING WITH AND DISPOSING OF GROUND/SURFACE WATER ENCOUNTERED DURING EXCAVATIONS
- ALL SOFT / HARD PAVED AREAS AFFECTED BY THE WORKS SHALL BE FULLY REINSTATED FOLLOWING THE INSTALLATION OF ALL DRAINAGE WORKS. ALL SURFACE MARKINGS AFFECTED BY THE WORKS SHALL BE FULLY REINSTATED.
- ALL SURPLUS EXCAVATED MATERIAL SHALL BE DISPOSED IN A DESIGNATED AREA ON SITE.
- UPON COMPLETION OF THE WORKS THE CONTRACTOR SHALL PROVIDE AS BUILT SETTING OUT CO-ORDINATE AND LEVEL INFORMATION.
- PIPEWORK WITH LESS THAN 750mm OF COVER IN TRAFFICKED AREAS TO BE CONCRETE ENCASED, (BEDDING CLASS 2)
- PIPEWORK WITH MORE THAN 750mm OF COVER TO HAVE CLASS 5 GRANULAR BED AND SURROUND.
- POLYPROPYLENE INSPECTION CHAMBERS OF 5000 > 1.2m DEEP TO BE FITTED WITH A REDUCED ACCESS FITTING.
- ALL FO AND RWP LOCATIONS TO BE TO BE COMPLETE WITH A LOW LEVEL ACCESS PLATE FOR RODDING.
- WHERE PROPOSED DRAINAGE PIPEWORK RUNS ARE IN CLOSE PROXIMITY TO THE NEW FOUNDATIONS, THE CONTRACTOR SHALL ALLOW FOR EXTENDING THE DEPTH OF NEW FOUNDATIONS IN LEAN MIX CONCRETE DOWN TO THE PROPOSED PIPE BEDDING LEVEL.

LEGEND

- EXISTING FOUL WATER PUBLIC SEWER
- EXISTING SURFACE WATER DRAIN
- PROPOSED SURFACE WATER DRAIN (TYPICALLY 1500 UNLESS NOTED OTHERWISE)
- PROPOSED STORMBLOC CELLULAR SURFACE WATER ATTENUATION SYSTEMS
- PROPOSED SURFACE WATER PRECAST CONCRETE MANHOLE (PCC)
- PROPOSED SURFACE WATER POLYPROPYLENE INSPECTION CHAMBER (PPIC)
- PROPOSED 'A'CO LINEAR DRAINAGE CHANNEL COMPLETE WITH SUMP OUTLET
- RWP
- PROPOSED RAINWATER DOWNSPOUT
- PROPOSED FOUL DRAIN (TYPICALLY 1000 UNLESS NOTED OTHERWISE)
- PROPOSED FOUL PRECAST CONCRETE MANHOLE
- PROPOSED FOUL POLYPROPYLENE INSPECTION CHAMBER
- SVP
- PROPOSED SOIL VENT PIPE (WITH LOW LEVEL ACCESS POINT)
- SS
- PROPOSED STUB STACK (WITH LOW LEVEL ACCESS POINT)
- GU
- PROPOSED TRAPPED GULLY UNIT (DETAILS TO BE CONFIRMED BY ARCHITECT)
- PROPOSED DIVERTED PUBLIC SEWER CONSTRUCTED UNDER A SECTION 185 AGREEMENT
- EXISTING PUBLIC SEWER TO BE GRUBBED OUT AND REPLACED UNDER A SECTION 185 AGREEMENT WITH YORKSHIRE WATER

PI	30.03.20	JH	Cover levels updated to new ground model	WNE	PJB
Rev.	0001	01	Revised	1	1
Status					

PRELIMINARY



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Client

Project

POWERHOUSE PROPCO SARL
PROJECT BRUCE
NORQUEST INDUSTRIAL ESTATE, BIRSTALL

Title

PROPOSED DRAINAGE LAYOUT.

Scale

1:2500@A1

Date

17.02.2020

Drawing No

TM_19_1261-55-01

Drawn

J.HALE

Checked

W.N.LLOYD

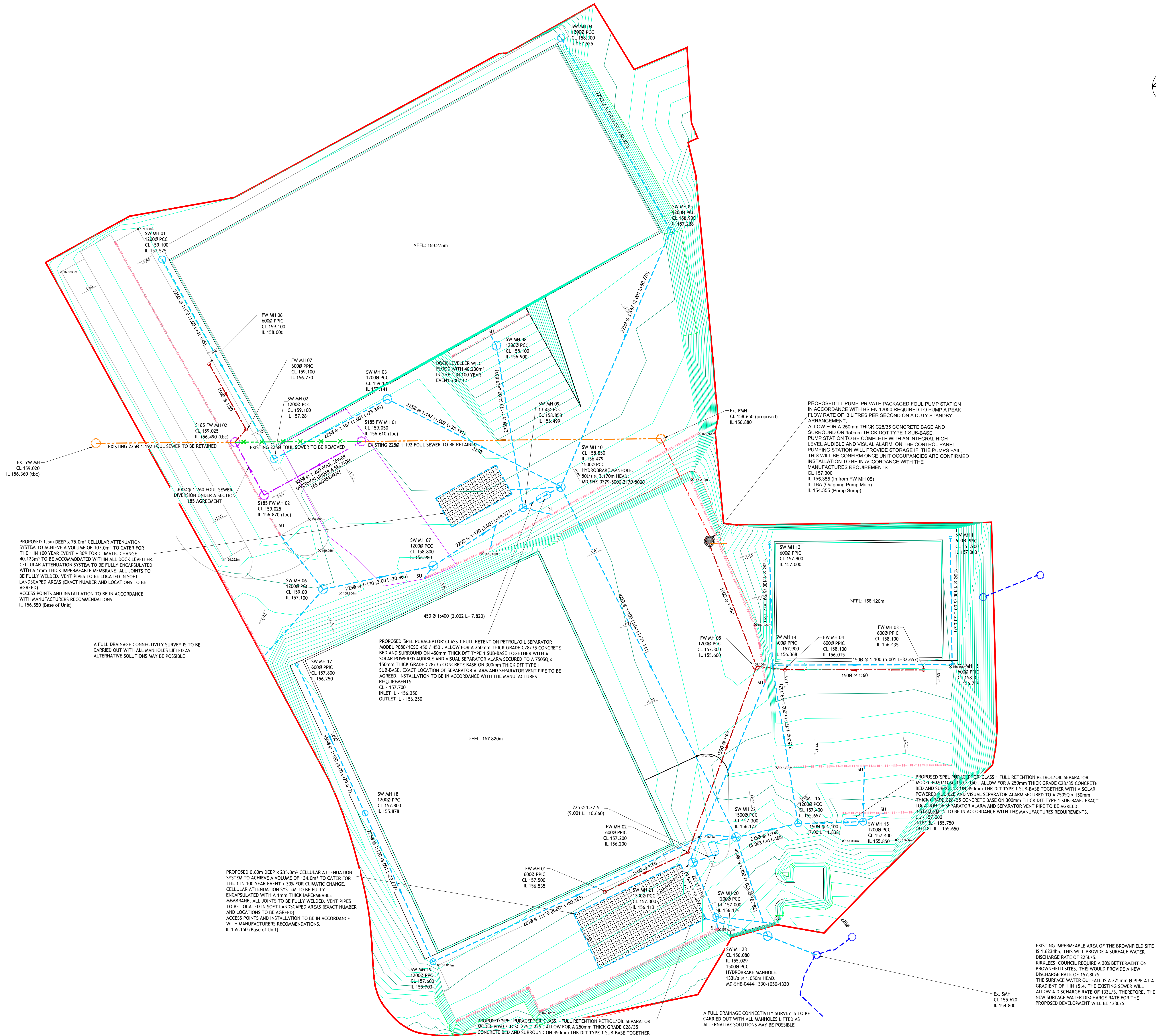
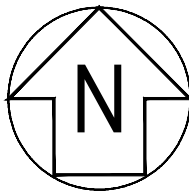
Revision

P1

Changes

W.N.LLOYD

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NOTE:
ALL SURFACE WATER CHAMBERS ARE TO BE PCC WITH D400 COVERS UNO.

FOUL CHAMBER TO BE MIN 4500 HD PPIC WITH C250 COVERS IN FOOTWAYS AND D400 IN CAR PARK AREAS.

ALL DRAINAGE WITH LESS THAN 750 COVER IS TO BE ENCASED IN MIN 150THK C32/40 CONCRETE - SEE DETAIL DRAWING FOR ENCASING DETAILS.

ALL ACCESS DOORS ARE TO HAVE LINEAR DRAINAGE CHANNELS WITH SUMP UNITS.

PROPOSED 0.60m DEEP x 235.0m² CELLULAR ATTENUATION SYSTEM TO ACHIEVE A VOLUME OF 134.0m³ TO CATER FOR THE 1 IN 100 YEAR EVENT + 30% FOR CLIMATIC CHANGE. CELLULAR ATTENUATION SYSTEM TO BE FULLY ENCAPSULATED WITH A 1mm THICK IMPERMEABLE MEMBRANE. ALL JOINTS TO BE FULLY WELDED. VENT PIPES TO BE LOCATED IN SOFT LANDSCAPED AREAS (EXACT NUMBER AND LOCATIONS TO BE AGREED). ACCESS POINTS AND INSTALLATION TO BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. IL 155.150 (Base of Unit)

PROPOSED SPEL PURACEPTOR CLASS 1 FULL RETENTION PETROL/OIL SEPARATOR MODEL P020/1CS5.150 x 150. ALLOW FOR A 250mm THICK GRADE C28/35 CONCRETE BED AND SURROUND ON 450mm THICK DIT TYPE 1 SUB-BASE TOGETHER WITH A SOLAR POWERED AUDIBLE AND VISUAL SEPARATOR ALARM SECURED TO A 750SQ x 150mm THICK GRADE C28/35 CONCRETE BASE ON 300mm THICK DIT TYPE 1 SUB-BASE. EXACT LOCATION OF SEPARATOR ALARM AND SEPARATOR VENT PIPE TO BE AGREED. INSTALLATION TO BE IN ACCORDANCE WITH THE MANUFACTURES REQUIREMENTS. CL - 157.700 INLET IL - 156.350 OUTLET IL - 156.250

PROPOSED SPEL PURACEPTOR CLASS 1 FULL RETENTION PETROL/OIL SEPARATOR MODEL P050 / 1CS5.225 x 225. ALLOW FOR A 250mm THICK GRADE C28/35 CONCRETE BED AND SURROUND ON 450mm THK DIT TYPE 1 SUB-BASE TOGETHER WITH A SOLAR POWERED AUDIBLE AND VISUAL SEPARATOR ALARM SECURED TO A 750SQ x 150mm THICK GRADE C28/35 CONCRETE BASE ON 300mm THICK DIT TYPE 1 SUB-BASE. EXACT LOCATION OF SEPARATOR ALARM AND SEPARATOR VENT PIPE TO BE AGREED. INSTALLATION TO BE IN ACCORDANCE WITH THE MANUFACTURES REQUIREMENTS. CL 157.500 INLET IL - 156.050 OUTLET IL - 155.950

PROPOSED TT PUMP PRIVATE PACKAGED FOUL PUMP STATION IN ACCORDANCE WITH BS EN 12050 REQUIRED TO PUMP A PEAK FLOW RATE OF 3 LITRES PER SECOND ON A DUTY STANDBY ARRANGEMENT. ALLOW FOR A 250mm THICK C28/35 CONCRETE BASE AND SURROUND ON 450mm THICK DIT TYPE 1 SUB-BASE. PUMP STATION TO BE COMPLETE WITH AN INTEGRAL HIGH LEVEL AUDIBLE AND VISUAL ALARM ON THE CONTROL PANEL. PUMPING STATION WILL PROVIDE STORAGE IF THE PUMPS FAIL. THIS WILL BE CONFIRM ONCE UNIT OCCUPANCIES ARE CONFIRMED. INSTALLATION TO BE IN ACCORDANCE WITH THE MANUFACTURES REQUIREMENTS. CL 157.300 IL 156.355 (in from FW MH 05) IL 154.355 (Pump Sump)

PROPOSED SPEL PURACEPTOR CLASS 1 FULL RETENTION PETROL/OIL SEPARATOR MODEL P020/1CS5.150 x 150. ALLOW FOR A 250mm THICK GRADE C28/35 CONCRETE BED AND SURROUND ON 450mm THK DIT TYPE 1 SUB-BASE TOGETHER WITH A SOLAR POWERED AUDIBLE AND VISUAL SEPARATOR ALARM SECURED TO A 750SQ x 150mm THICK GRADE C28/35 CONCRETE BASE ON 300mm THICK DIT TYPE 1 SUB-BASE. EXACT LOCATION OF SEPARATOR ALARM AND SEPARATOR VENT PIPE TO BE AGREED. INSTALLATION TO BE IN ACCORDANCE WITH THE MANUFACTURES REQUIREMENTS. CL 157.000 INLET IL - 155.750 OUTLET IL - 155.650

EXISTING IMPERMEABLE AREA OF THE BROWNFIELD SITE IS 1.6234ha. THIS WILL PROVIDE A SURFACE WATER DISCHARGE RATE OF 22SL/S. KIRKLEES COUNCIL REQUIRE A 30% BETTERMENT ON BROWNFIELD SITES. THIS WOULD PROVIDE A NEW DISCHARGE RATE OF 157.8L/S. THE SURFACE WATER OUTFALL IS A 225mm Ø PIPE AT A GRADIENT OF 1 IN 15.4. THE EXISTING SEWER WILL ALLOW A DISCHARGE RATE OF 133L/S. THEREFORE, THE NEW SURFACE WATER DISCHARGE RATE FOR THE PROPOSED DEVELOPMENT WILL BE 133L/S.

PLEASE NOTE:
DETAILED BACKGROUND MAP INFORMATION IS A TOPOGRAPHICAL SURVEY PROVIDED BY JONES BROS.
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