

DRAINAGE NOTES

THE BASE SPECIFICATION FOR ALL ADAPTABLE DRAINAGE WORKS SHALL BE THE WATER AUTHORITIES ASSOCIATION SEWERS FOR ADOPTION (LATEST EDITION). FOR PRIVATE (NON-ADOPTABLE) DRAINAGE WORKS, THE BASE SPECIFICATION SHALL BE THE WATER INDUSTRY (LATEST EDITION) SUPPLEMENTED BY MILLWARD'S DRAINAGE SPECIFICATION.

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS AND ARCHITECTS DETAILS.

ALL EXTERNAL BUILDING AND CAR PARK DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH THE ABOVE RELEVANT SPECIFICATIONS AND APPROVED DOCUMENT PART H OF THE BUILDING REGULATIONS (LATEST EDITION).

THE FOLLOWING PIPE STRENGTHS SHALL BE ADOPTED UNLESS OTHERWISE NOTED:-

- PIPES UP TO AND INCLUDING 150MM DIAMETER TO BE UPVC TO BSEN 1401 (PLASTIC INSPECTION CHAMBERS TO BS7158) OR CLAYWARE TO BSEN295 (200MM CRUSHING STRENGTH).
- PIPES 225mm DIAMETER TO BE CLASS 160 CLAYWARE TO BSEN295.
- PIPES 300MM DIAMETER TO BE CLASS 160 CLAYWARE TO BSEN295 OR CLASS M CONCRETE TO BS5911.
- PIPES ABOVE 300mm DIAMETER TO BE CLASS M CONCRETE TO BS5911.

ALL PIPE RUNS TO BE LAID WITH FLEXIBLE JOINTS.

ALL PIPES ENTERING AND EXITING MANHOLES ARE TO BE CONNECTED WITH PIPE SOFFITS LEVEL UNLESS OTHERWISE NOTED.

BEDDING AND SURROUND TO BE AS PER THE FOLLOWING TABLE:-

LOCATION	COVER TO SOFFIT	BEDDING
ROADS	>1.2m	CLASS 2 CONCRETE SURROUND
NON-ADOPTABLE SEWERS BELOW CAR PARKING	>0.9m	CLASS 2 CONCRETE SURROUND
HARD AND SOFT LANDSCAPING	>0.6m	CLASS 2 CONCRETE SURROUND

THE FOLLOWING CONCRETE MIXES ARE TO BE USED (IN ACCORDANCE WITH BS8500)

STANDARD MIX REFERENCE	APPLICATIONS
ST1 (C7.5)	FILLINGS, BINDINGS, SOFT SPOTS AND DRAINAGE SUMPS
ST4 (C20)	ALL OTHER APPLICATIONS

FOR ST4 MIX, SULPHATE RESISTING PORTLAND CEMENT SHALL BE USED IN ACCORDANCE WITH SUPPLIER'S CLASS IN ACCORDANCE WITH RECOMMENDATIONS OF THE SITE INVESTIGATION.

ALL PRECAST CONCRETE PRODUCTS (IE PIPES, MANHOLES RINGS ETC) SHALL COMPLY WITH BS EN 1916 (PIPES, FITTINGS, ETC) ARE BS EN 1917 (MANHOLE, INSPECTION CHAMBERS, ETC...) AND SHALL BE OF SUITABLE CONCRETE MIX TO CATER FOR SULPHATE CLASS DC1.

PRE-FORMED CHANNELS ARE TO BE USED IN MANHOLES WHERE APPLICABLE.

GRANULITHIC CONCRETE BEHINDING TO BE STEEL TROWELLED TO A DENSE SMOOTH FACE NEATLY SHAPED AND FINISHED TO ALL BRANCH CONNECTIONS AND LAID IN ACCORDANCE WITH THE SPECIFICATION.

ALL CONNECTIONS TO BE TURNED IN DIRECTION OF FLOW USING PIPE BENDS.

MANHOLE COVERS AND FRAMES TO BE DUCTILE IRON GROUP 4 CLASS D400 DOUBLE TRIANGULAR TO BS EN124 IN VEHICULAR TRAFFICKED AREAS.

MANHOLE COVERS AND FRAMES TO BE DUCTILE IRON GROUP 2 CLASS B125 CIRCULAR OR RECTANGULAR TO BS EN124 IN AREAS OUTSIDE VEHICULAR TRAFFICKED AREAS.

DRAINAGE CHANNEL GRATINGS SHALL BE DUCTILE IRON GROUP 4 CLASS D400 TO BS EN124.

FIRST FLEXIBLE JOINT IN PIPES ADJACENT TO A MANHOLE SHALL BE A MAXIMUM OF 600MM FROM INSIDE FACE OF MANHOLE CONNECTING TO ROCKER PIPE. THE LENGTH OF ROCKER PIPE IS AS FOLLOWS:-

PIPE DIAMETER	LENGTH OF ROCKER PIPE
150mm - 600mm	600mm
675mm - 750mm	1000mm
825mm AND OVER	1250mm

MANHOLES WITH OUTGOING PIPES GREATER THAN 600MM DIAMETER SHALL BE FITTED WITH GUARD BARS, SAFETY CHAINS OR OTHER SAFETY DEVICES.

THE PRINCIPAL CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THE EXISTING LINE AND INVERT LEVELS OF ANY CONNECTION POINTS FOR BOTH THE FOUL AND SURFACE WATER SYSTEMS, PRIOR TO UNDERTAKING INSTALLATION OF ANY NEW DRAINAGE WORKS. ANY DEVIATION TO THE LEVELS AND POSITIONS INDICATED ON THE DRAWING SHOULD BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE PROJECT ENGINEER.

ALL INVERTS SPECIFIED ARE OUTGOING (EXCEPT BACKSLOP).

ROAD GULLY CONNECTIONS TO BE 150mm DIA. LAID AT A MINIMUM GRADIENT OF 1:150 UNLESS NOTED OTHERWISE.

RWP CONNECTIONS TO BE 100mm DIA. LAID AT MINIMUM GRADIENT OF 1:80 UNLESS NOTED OTHERWISE.

ALL FOUL CONNECTIONS TO BE 100mm DIA. LAID AT A MINIMUM GRADIENT OF 1:40 UNLESS NOTED OTHERWISE.

ALL CONNECTIONS TO BE MADE BY PURPOSE MADE JUNCTIONS AS FAR AS PRACTICABLE.

INTERNAL INSPECTION CHAMBERS & ACCESS FITTINGS TO BE PROVIDED WITH LOCKABLE DOUBLE SEALED MANHOLE COVER & FRAMES GRADE B125 OR D400 TO BSEN 124 TO SUIT LOADING CONDITIONS.

ALL BYPASS SEPARATORS AND OTHER PROPRIETARY TANKS, ATTENTION ETC ARE TO BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. WHERE LOCATED WITHIN TRAFFICKED AREAS A 300mm THICK CONCRETE COVER SLAB MIX RC35 REINFORCED WITH 2 LAYERS A393 MESH SHALL BE CONSTRUCTED OVER THE BURIED TANKS IF REQUIRED BY THE MANUFACTURER.

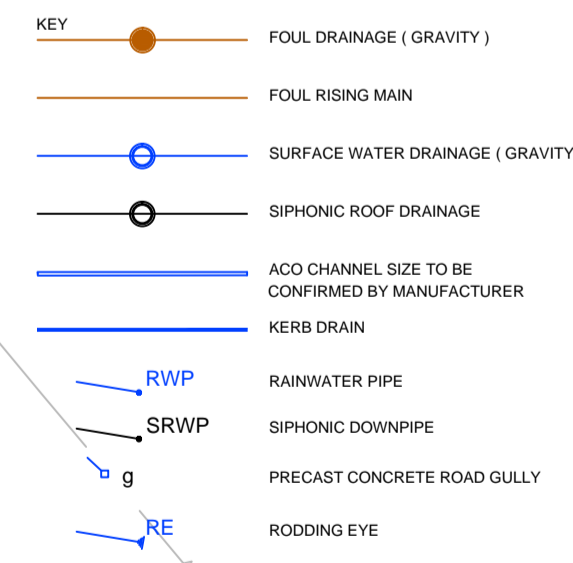
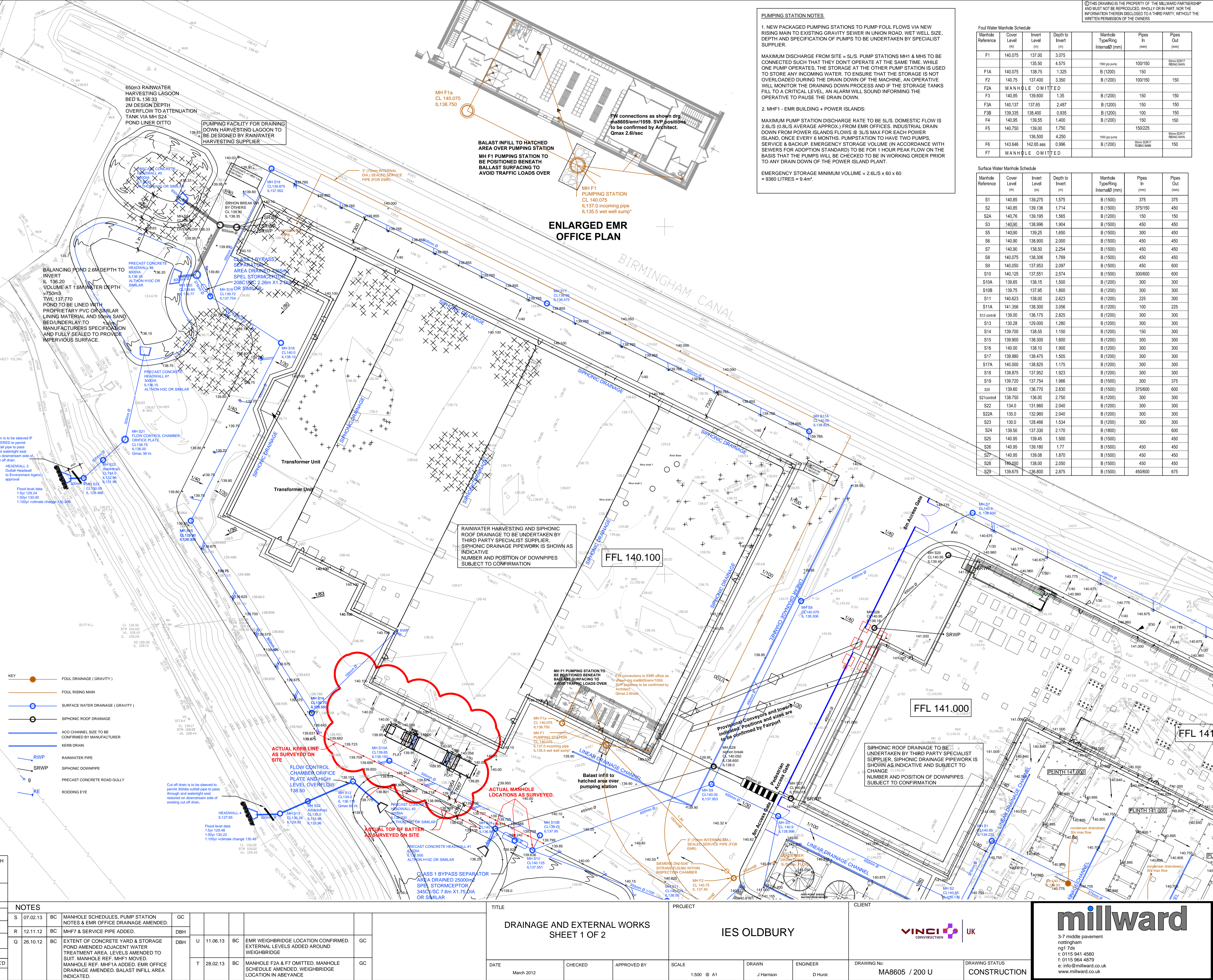
ALL DRAINS TO BE TESTED PRIOR TO BACKFILLING. AFTER BACKFILLING AND URON COMPLETION OF HARD LANDSCAPING, IN ADDITION ALL DRAINS TO BE INSPECTED BY CCTV METHODS PRIOR TO HARD LANDSCAPING WHERE REQUIRED BY THE SPECIFICATION.

ALL DRAINAGE WORKS WITHIN THE ZONE OF INFLUENCE OF TREES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE NHBC STANDARDS AND TREE PRESERVATION OFFICERS REQUIREMENTS.

ALL CONTRACTOR DESIGNED RAINWATER DRAINAGE SYSTEMS ARE TO BE CHECKED BY THE M&E CONSULTANT (IF APPOINTED) PRIOR TO INSTALLATION.

ALL BYPASS SEPARATORS MUST BE CLASS 1 AND PROVIDED WITH AN ALARM IN ACCORDANCE WITH THE EA PUBLICATION PP63. LATEST REVISION.

REV	DATE	BY	DETAILS	CHKD
P	19.10.12	BC	MANHOLE REFS: MHF1, MHS26 & MHS27 MOVED. DRAWINGS UPDATED TO SHOW CHINOOKS CONDENSER DRAIN POINTS. PUMPSTATION NOTES ADDED.	DBH
N	25-9-12	JH	FOUL DRAINAGE RUNS REVISED IN ACCORDANCE WITH EMCOR DRAWINGS. RWP TO MCCS REPOSITIONED.	
M	24-8-12	AJL	FOUL DRAINAGE RUNS REVISED	
L	20-8-12	AJL	M&E BUILDING REVISED KERBLINE REINSTATED	
K	19-7-12	AJL	TRANSFORMERS ADDED ROAD WIDTHS REVISED	
J	9-7-12	AJL	ACCESS ROAD ALTERED WEIGHBRIDGE AND GATEHOUSE REPOSITIONED	
H	21-6-12	AJL	HARVEST POND ADDED MCC BLDG REVISED	
AMENDMENTS				



NOTES

NO	DATE	BY	DETAILS	CHKD
S	07.02.13	BC	MANHOLE SCHEDULES, PUMP STATION NOTES & EMR OFFICE DRAINAGE AMENDED.	GC
R	11.12.12	BC	MHF7 & SERVICE PIPE ADDED.	DBH
Q	26.10.12	BC	EXTENT OF CONCRETE YARD & STORAGE POND AMENDED ADJACENT WATER TREATMENT AREA. LEVELS AMENDED TO SUIT. MANHOLE REF. MHF1 MOVED. MANHOLE REF. MHF1A ADDED. EMR OFFICE DRAINAGE AMENDED. BALAST INFILL AREA INDICATED.	DBH
U	11.06.13	BC	EMR WEIGHBRIDGE LOCATION CONFIRMED. EXTERNAL LEVELS ADDED AROUND WEIGHBRIDGE	GC
T	28.02.13	BC	MANHOLE F2A & F7 OMITTED. MANHOLE SCHEDULE AMENDED. WEIGHBRIDGE LOCATION IN ABEYANCE	GC

TITLE	PROJECT	CLIENT
DRAINAGE AND EXTERNAL WORKS SHEET 1 OF 2	IES OLDBURY	VINCI CONSTRUCTION UK

DATE	CHECKED	APPROVED BY	SCALE	DRAWN	ENGINEER	DRAWING NO.	DRAWING STATUS
March 2012			1:500 @ A1	J Harrison	D Hurst	MA8605 / 200 U	CONSTRUCTION

PUMPING STATION NOTES

1. NEW PACKAGED PUMPING STATIONS TO PUMP FLOW FLWS VIA NEW RISING MAIN TO EXISTING GRAVITY SEWER IN UNION ROAD. WET WELL SIZE, DEPTH AND SPECIFICATION OF PUMPS TO BE UNDERTAKEN BY SPECIALIST SUPPLIER.

MAXIMUM DISCHARGE FROM SITE = 5L/S. PUMP STATIONS MH1 & MH5 TO BE CONNECTED SUCH THAT THEY DON'T OPERATE AT THE SAME TIME, WHILE ONE PUMP OPERATES, THE STORAGE AT THE OTHER PUMP STATION IS USED TO STORE ANY INCOMING WATER, TO ENSURE THAT THE STORAGE IS NOT OVERLOADED DURING THE DRAIN DOWN OF THE MACHINE, AN OPERATIVE WILL MONITOR THE DRAINING DOWN PROCESS AND IF THE STORAGE TANKS FILL TO A CRITICAL LEVEL, AN ALARM WILL SOUND INFORMING THE OPERATIVE TO PAUSE THE DRAIN DOWN.

2. MHF1 - EMR BUILDING + POWER ISLANDS.

MAXIMUM PUMP STATION DISCHARGE RATE TO BE 5L/S. DOMESTIC FLOW IS 2.6L/S (0.8L/S AVERAGE APPROX.) FROM EMR OFFICES. INDUSTRIAL DRAIN DOWN FROM POWER ISLANDS FLOWS @ 3L/S MAX FOR EACH POWER ISLAND. ONCE EVERY 6 MONTHS, PUMPSTATION TO HAVE TWO PUMPS, SERVICE & BACKUP. EMERGENCY STORAGE VOLUME (IN ACCORDANCE WITH SEWERS FOR ADOPTION STANDARD) TO BE FOR 1 HOUR PEAK FLOW ON THE BASIS THAT THE PUMPS WILL BE CHECKED TO BE IN WORKING ORDER PRIOR TO ANY DRAIN DOWN OF THE POWER ISLAND PLANT.

EMERGENCY STORAGE MINIMUM VOLUME = 2.6L/S x 60 x 60 = 9360 LITRES @ 9.4m³.

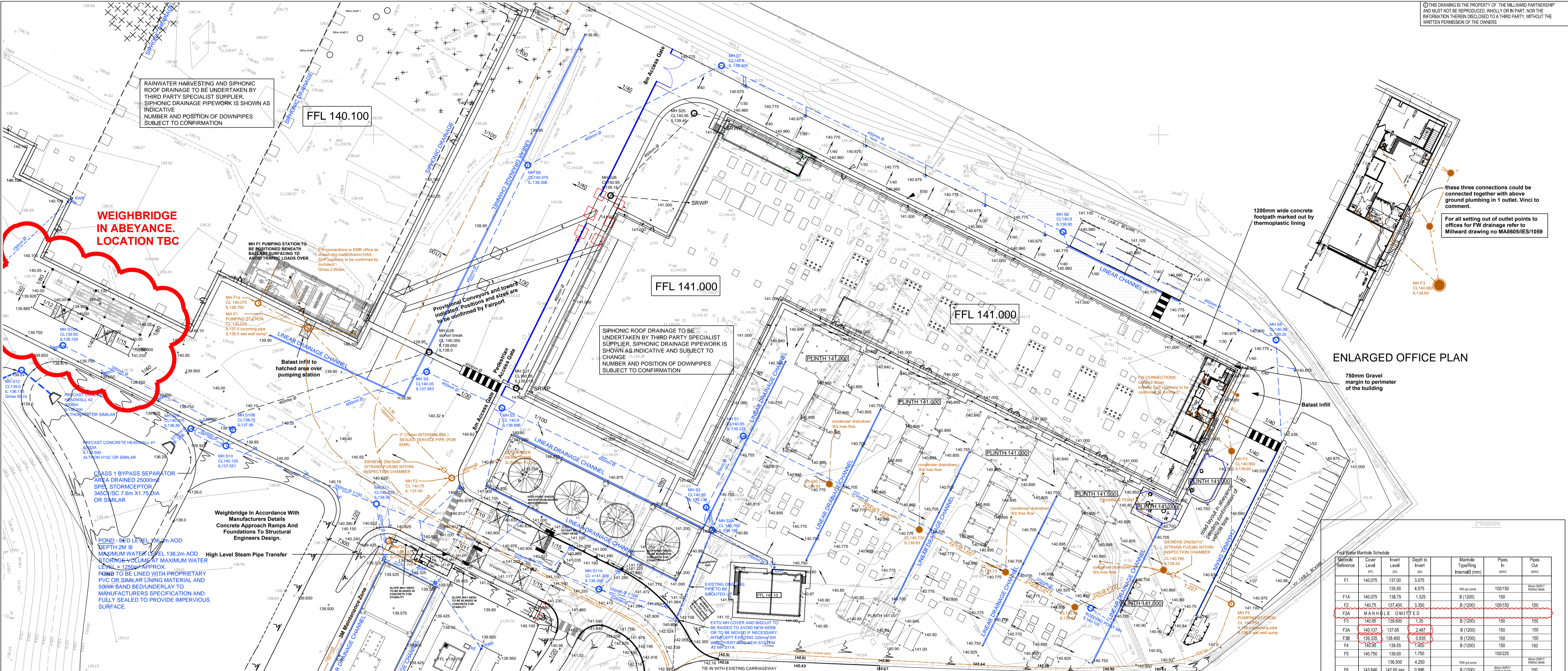
Foul Water Manhole Schedule

Manhole Reference	Cover Level (m)	Invert Level (m)	Depth to Invert (m)	Manhole Type/Ring InternalØ (mm)	Pipes In (mm)	Pipes Out (mm)
F1	140.075	137.00	3.075			
F1A	140.075	138.75	1.325	150 ggs pump	100/150	150
F2	140.75	137.400	3.350	B (1200)	100/150	150
F2A	MANHOLE OMITTED					
F3	140.95	139.600	1.35	B (1200)	150	150
F3A	140.137	137.65	2.487	B (1200)	150	150
F3B	139.335	138.400	0.935	B (1200)	100	150
F4	140.95	139.55	1.400	B (1200)	150	150
F5	140.750	139.000	1.750		150/225	
F6		136.500	4.250	150 ggs pump		
F7	MANHOLE OMITTED					

Surface Water Manhole Schedule

Manhole Reference	Cover Level (m)	Invert Level (m)	Depth to Invert (m)	Manhole Type/Ring InternalØ (mm)	Pipes In (mm)	Pipes Out (mm)
S1	140.85	139.275	1.575	B (1500)	375	375
S2	140.85	139.136	1.714	B (1500)	375/150	450
S2A	140.76	139.195	1.565	B (1200)	150	150
S3	140.90	138.996	1.904	B (1500)	450	450
S5	140.90	139.25	1.650	B (1500)	300	450
S6	140.90	138.900	2.000	B (1500)	450	450
S7	140.90	138.50	2.254	B (1500)	450	450
S8	140.075	138.306	1.769	B (1500)	450	450
S9	140.050	137.953	2.097	B (1500)	450	600
S10	140.125	137.551	2.574	B (1500)	300/600	600
S10A	139.65	138.15	1.500	B (1200)	300	300
S10B	139.75	137.95	1.800	B (1200)	300	300
S11	140.623	138.00	2.623	B (1200)	225	300
S11A	141.356	138.300	3.056	B (1200)	100	225
S12 control	139.00	136.175	2.825	B (1200)	300	300
S13	130.28	129.000	1.280	B (1200)	300	300
S14	139.700	138.55	1.150	B (1200)	150	300
S15	139.900	138.300	1.600	B (1200)	300	300
S16	140.00	138.10	1.900	B (1200)	300	300
S17	139.980	138.475	1.505	B (1200)	300	300
S17A	140.000	138.825	1.175	B (1200)	300	300
S18	139.875	137.952	1.923	B (1200)	300	300
S19	139.720	137.754	1.966	B (1500)	300	375
S20	139.60	136.770	2.830	B (1500)	375/600	600
S2 control	138.750	136.00	2.750	B (1200)	300	300
S22	134.0	128.466	2.040	B (1200)	300	300
S22A	135.0	132.960	2.040	B (1200)	300	300
S23	130.0	128.466	1.534	B (1200)	300	300
S24	139.50	137.330	2.170	B (1800)	600	600
S25	140.95	139.45	1.500	B (1500)	450	450
S26	140.95	139.180	1.770	B (1500)	450	450
S27	140.95	139.08	1.870	B (1500)	450	450
S28	139.650	138.00	2.050	B (1500)	450	450
S29	139.675	136.800	2.875	B (1500)	450/600	675

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REV	DATE	BY	DETAILS	CHKD
A1			AMENDMENTS	

T	U	T	S	R	Q	P	N	M	L	K	J	H	G	F	E
28.02.13	07.02.13	30.11.12	12.11.12	26.10.12	19.10.12	01-10-12	25-9-12	24-8-12	20-8-12	19-7-12	9-7-12	21-6-12	18-6-12	28.5.12	21.05.12
BC	BC	BC	BC	BC	BC	JH	JH	AJL	AJL	AJL	AJL	AJL	AJL	AJL	AJL
LEVEL 5 AMENDED WITH ACCESS ROAD. WEIGHBRIDGE LOCATIONS CONFIRMED.	PUMP STATIONS AMENDED TO SUIT 5L/S DISCHARGE LIMIT. DRAINAGE AMENDED TO AVOID NEW GANTRY FOUNDATIONS AND TO SUIT REVISED POWER ISLAND DRAIN DOWN LOCATIONS. TRADE EFFLUENT FLOW METERS ADDED AS REQUESTED BY SEVERN TRENT. MH24 ADDED TO ALLOW WATER STORAGE FOR POSSIBLE ADDITIONAL PUMP STATION MH17 AS REQUESTED BY VINCI 602/13. MANHOLE SCHEDULE AMENDED.	WEIGHBRIDGE SETTING OUT AMENDED & HV INTAKE BUILDING AMENDED.	INCOMING SERVICES COMPOUND AMENDED. MH7 & SERVICE PIPE ADDED.	MANHOLE REF. MH1 MOVED. MH1A ADDED. EMR OFFICE DRAINAGE AMENDED. BALAST INFILL AREA INDICATED.	MANHOLE REFS. MH1, MHS26 & MHS27 MOVED. DRAWINGS UPDATED TO SHOW CHIMNEYS CONDENSER DRAIN POINTS. PUMPSTATION NOTES ADDED. INCOMING SERVICES COMPOUND MOVED.	FOUL DRAINAGE RUNS REVISED IN OFFICE. TO IES BUILDING.	FOUL DRAINAGE RUNS REVISED IN ACCORDANCE WITH EMCOR DRAWINGS. RWP TO MCCS REPOSITIONED.	FOUL DRAINAGE RUNS REVISED.	M&E BUILDING REVISED KERBLINE REINSTATED.	TRANSFORMERS ADDED ROAD WIDTH REVISED. GATEHOUSE REPOSITIONED. EXTG SW DRAIN ADDED.	ACCESS ROAD ALTERED WEIGHBRIDGE AND GATEHOUSE REPOSITIONED.	HARVEST POND ADDED MCC BLDG REVISED.	DRAINAGE RUNS SEPERATED.	RAINWATER HARVESTING LAYOUT REVISED DRAINAGE LAYOUT AMENDMENTS.	GULLY OPTION TO REAR OF IES BLDG ROAD LAYOUT REVISED TO EMR BUILDING MINOR DRAINAGE LAYOUT AMENDMENTS.
GC	DBH	DBH	DBH	DBH	DBH										

NOTES

FOR DRAINAGE CONSTRUCTION NOTES REFER TO DRAWING MA8605-200

TITLE
DRAINAGE AND EXTERNAL WORKS
SHEET 2 OF 2

PROJECT
IES OLDBURY

CLIENT
VINCI CONSTRUCTION UK

DATE March 2012

CHECKED

APPROVED BY

SCALE 1:500 @ A1

DRAWN J Harrison

ENGINEER D Hurst

DRAWING No. MA8605 / 201 V

DRAWING STATUS CONSTRUCTION

PUMPING STATION NOTES

1. NEW PACKAGED PUMPING STATIONS TO PUMP FOUL FLOWS VIA NEW RISING MAIN TO EXISTING GRAVITY SEWER IN UNION ROAD. SET LEVEL, DEPTH AND SPECIFICATION OF PUMPS TO BE UNDERTAKEN BY SPECIALIST SUPPLIER.

MAXIMUM DISCHARGE FROM SITE = 5L/S. PUMP STATIONS MH1 & MH5 TO BE CONNECTED SUCH THAT THEY DON'T OPERATE AT THE SAME TIME. WHILE ONE PUMP OPERATES, THE STORAGE AT THE OTHER PUMP STATION IS USED TO STORE ANY INCOMING WATER. TO ENSURE THAT THE STORAGE IS NOT OVERLOADED DURING THE DRAIN DOWN OF THE MACHINE, AN OPERATIVE WILL MONITOR THE DRAINING DOWN PROCESS AND IF THE STORAGE TANKS FILL TO A CRITICAL LEVEL, AN ALARM WILL SOUND INFORMING THE OPERATIVE TO PAUSE THE DRAIN DOWN.

2. MH1 - EMR BUILDING + POWER ISLANDS:

MAXIMUM PUMP STATION DISCHARGE RATE TO BE 5L/S. DOMESTIC FLOW IS 2.6L/S (0.8L/S AVERAGE APPROX.) FROM EMR OFFICES. INDUSTRIAL DRAIN DOWN FROM POWER ISLANDS FLOWS @ 3L/S MAX FOR EACH POWER ISLAND. ONCE EVERY 6 MONTHS, PUMPSTATION TO HAVE TWO PUMPS, SERVICE & BACKUP. EMERGENCY STORAGE VOLUME (IN ACCORDANCE WITH SEWERS FOR ADOPTION STANDARD) TO BE FOR 1 HOUR PEAK FLOW ON THE BASIS THAT THE PUMPS WILL BE CHECKED TO BE IN WORKING ORDER PRIOR TO ANY DRAIN DOWN OF THE POWER ISLAND PLANT.

EMERGENCY STORAGE MINIMUM VOLUME = 2.6L/S x 60 x 60 = 9360 LITRES = 9.4m³

3. MH5 - IES BUILDING + PLANT DISCHARGE:

MAXIMUM PUMP STATION DISCHARGE RATE TO BE 5L/S. PUMPING STATION TO BE DESIGNED TO SUIT DOMESTIC FLOWS @ 2.3L/S (0.7L/S AVERAGE APPROX.) FROM IES OFFICES AND THE FOLLOWING PLANT DISCHARGE:

- 0.7L/S MAXIMUM CONTINUOUS PLANT DISCHARGE
- 6L/S MAXIMUM FOR DRAIN DOWN OF 2 STEAM BOILERS AT ANY ONE TIME. 4 STEAM BOILERS TOTAL TO BE DRAINED DOWN ONCE EVERY SIX MONTHS.

PUMPSTATION TO HAVE 2 PUMPS, SERVICE & BACKUP. EMERGENCY STORAGE VOLUME (IN ACCORDANCE WITH SEWERS FOR ADOPTION STANDARD) TO BE FOR 1 HOUR PEAK FLOW ON THE BASIS THAT THE PUMPS WILL BE CHECKED TO BE IN WORKING ORDER PRIOR TO ANY DRAIN DOWN OF THE STEAM BOILERS.

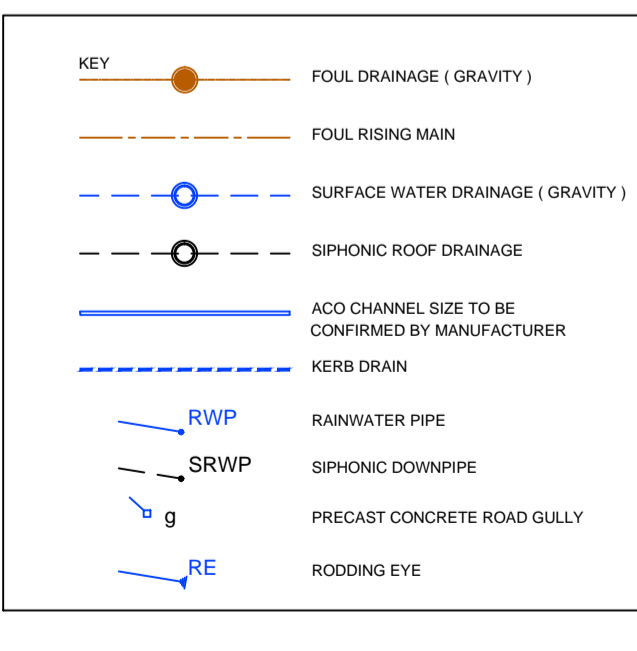
EMERGENCY STORAGE MINIMUM VOLUME = 3L/S x 60 x 60 = 10800 LITRES = 10.8m³

Foot Water Manhole Schedule

Manhole Reference	Cover Level (m)	Invert Level (m)	Depth to Invert (m)	Manhole Type/Ring Internal (mm)	Pipes In (mm)	Pipes Out (mm)
F1	140.075	137.00	3.075	B (1500)	375	375
F1A	140.075	135.50	4.575	B (1500)	375	150
F2	140.75	137.400	3.350	B (1200)	100	150
F2A	MANHOLE OMITTED					
F3	140.95	136.600	1.35	B (1200)	150	150
F3A	140.137	137.65	2.487	B (1200)	150	150
F3B	139.335	138.400	0.935	B (1200)	100	150
F4	140.95	139.55	1.400	B (1200)	150	150
F5	140.750	139.00	1.750	B (1200)	150	225
F6	143.646	142.85	0.796	B (1200)	300	150
F7	MANHOLE OMITTED					

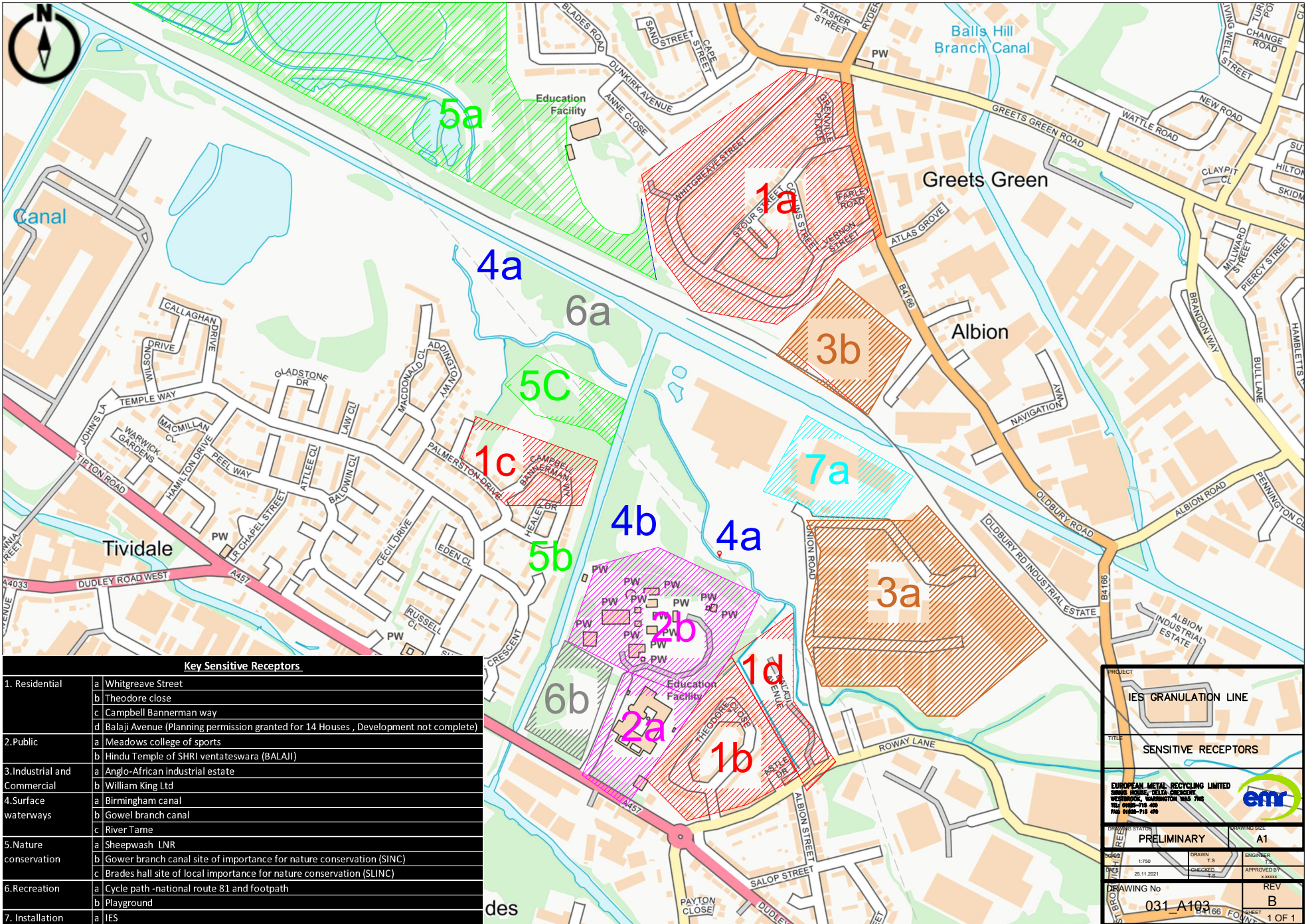
Surface Water Manhole Schedule

Manhole Reference	Cover Level (m)	Invert Level (m)	Depth to Invert (m)	Manhole Type/Ring Internal (mm)	Pipes In (mm)	Pipes Out (mm)
S1	140.85	139.275	1.575	B (1500)	375	375
S2	140.85	139.136	1.714	B (1500)	375	450
S2A	140.76	139.195	1.565	B (1200)	150	150
S3	140.90	138.996	1.904	B (1500)	450	450
S5	140.90	139.25	1.650	B (1500)	300	450
S6	140.90	138.900	2.000	B (1500)	450	450
S7	140.90	138.50	2.254	B (1500)	450	450
S8	140.750	138.356	1.789	B (1500)	450	450
S9	140.000	137.963	2.037	B (1500)	450	600
S10	140.125	137.561	2.574	B (1500)	300	600
S10A	139.665	138.15	1.500	B (1200)	300	300
S10B	139.75	137.95	1.800	B (1200)	300	300
S11	140.623	138.00	2.623	B (1200)	225	300
S11A	141.356	138.300	3.056	B (1200)	100	225
S12 control	139.00	136.175	2.825	B (1200)	300	300
S13	130.28	129.000	1.280	B (1200)	300	300
S14	139.700	138.55	1.150	B (1200)	150	300
S15	139.900	138.300	1.600	B (1200)	300	300
S16	140.00	138.100	1.900	B (1200)	300	300
S17	139.980	138.475	1.505	B (1200)	300	300
S17A	140.000	138.625	1.175	B (1200)	300	300
S18	139.975	137.662	1.623	B (1500)	300	300
S19	139.720	137.754	1.966	B (1500)	300	375
S20	139.60	136.770	2.830	B (1500)	275	600
S21 control	138.750	136.000	2.750	B (1200)	300	300
S22	134.0	131.960	2.040	B (1200)	300	300
S22A	135.0	132.960	2.040	B (1200)	300	300
S23	130.0	128.466	1.534	B (1200)	300	300
S24	139.50	137.330	2.170	B (1800)	600	600
S25	140.95	139.45	1.500	B (1500)	450	450
S26	140.95	139.180	1.77	B (1500)	450	450
S27	140.95	139.08	1.870	B (1500)	450	450
S28	140.050	138.00	2.050	B (1500)	450	450
S29	139.675	136.600	2.875	B (1500)	450	675




millward

3-7 middle pavement
northampton
ng1 7dx
t: 0115 941 4560
f: 0115 964 4879
e: info@millward.co.uk
www.millward.co.uk



Key Sensitive Receptors

1. Residential	a Whitgreave Street b Theodore close c Campbell Bannerman way d Balaji Avenue (Planning permission granted for 14 Houses , Development not complete)
2.Public	a Meadows college of sports b Hindu Temple of SHRI ventateswara (BALAJI)
3.Industrial and Commercial	a Anglo-African industrial estate b William King Ltd
4.Surface waterways	a Birmingham canal b Gowel branch canal c River Tame
5.Nature conservation	a Sheepwash LNR b Gower branch canal site of importance for nature conservation (SINC) c Brades hall site of local importance for nature conservation (SLINC)
6.Recreation	a Cycle path -national route 81 and footpath b Playground
7. Installation	a IES

PROJECT IES GRANULATION LINE	
TITLE SENSITIVE RECEPTORS	
EUROPEAN METAL RECYCLING LIMITED 60000 HOLLIS, 2010A GERRARD WESTBOROUGH, DERBYSHIRE S43 7NF TEL: 01509-716 000 FAX: 01509-716 000	
	
DRAWING STATUS PRELIMINARY	DRAWING SIZE A1
SCALE 1:750	DATE 25.11.2021
DRAWN T.S.	CHECKED E.S.
APPROVED BY A. BROWN	REV B
DRAWING No 031_A103	REV B
1/166	1 OF 1