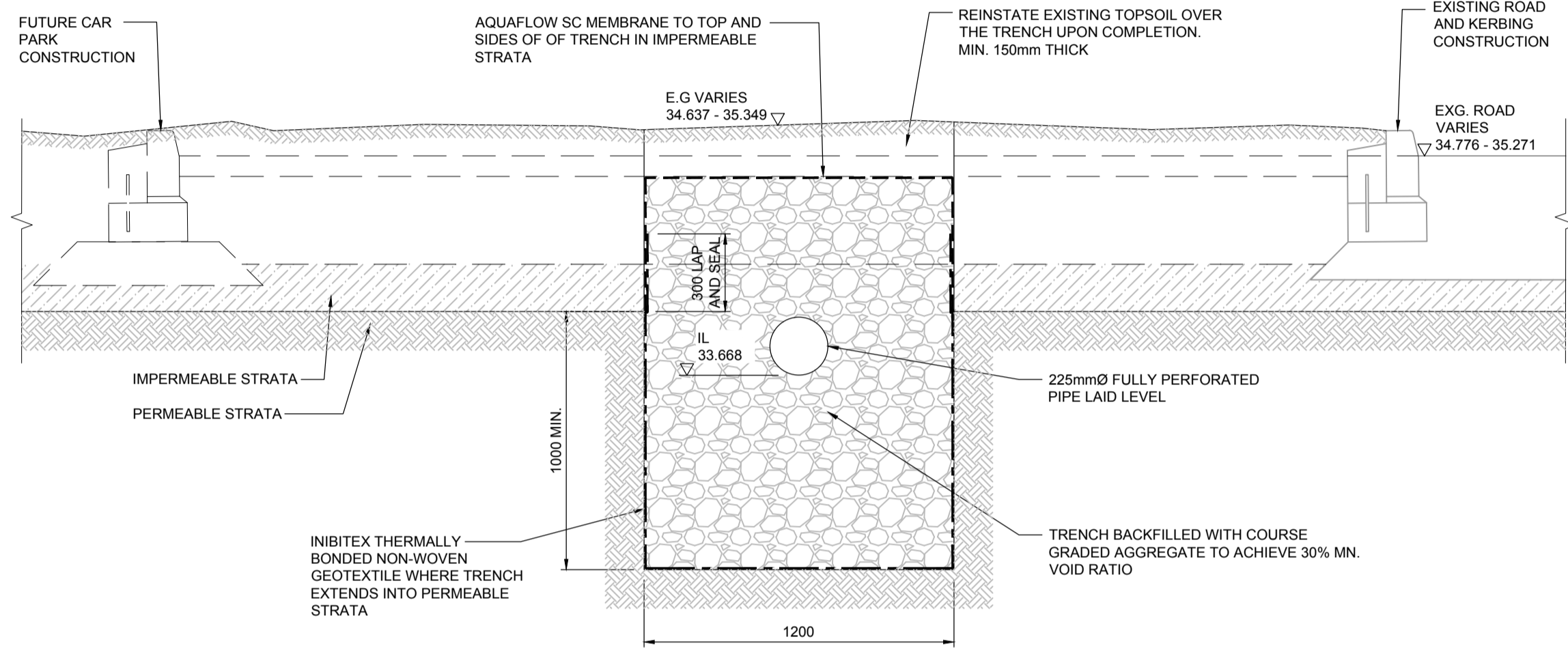


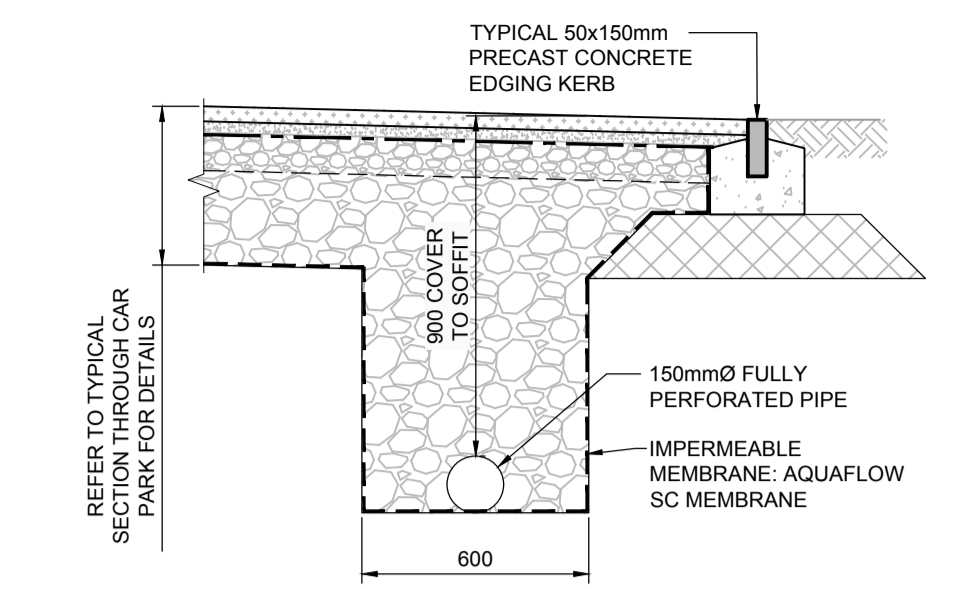
TYPICAL SECTION THROUGH FLOW CONTROL

SCALE 1:20



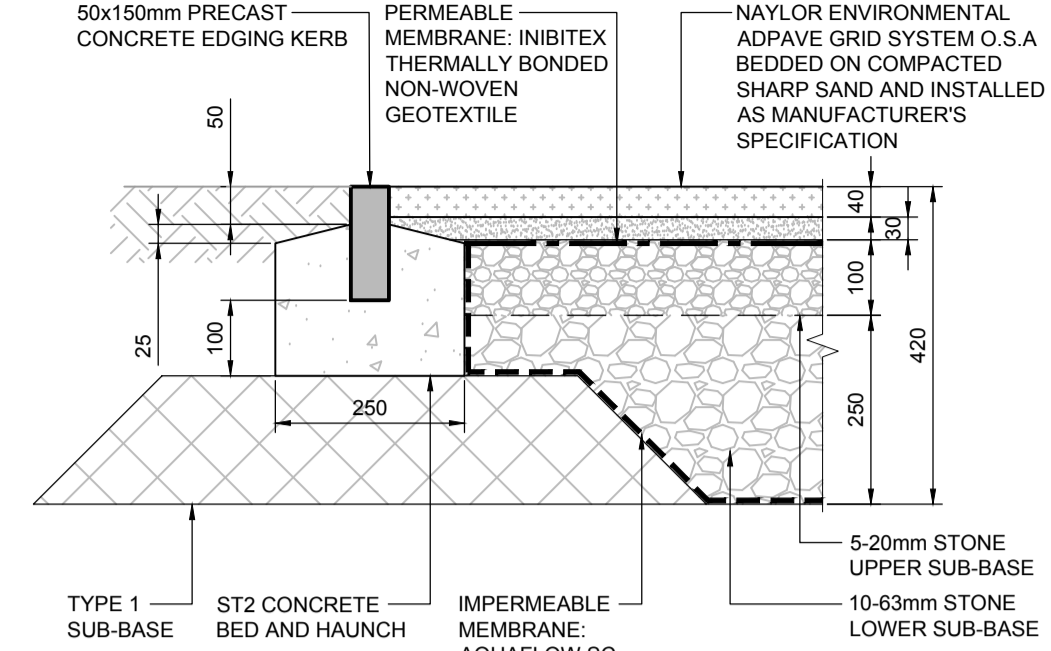
TYPICAL SECTION THROUGH INFILTRATION TRENCH

SCALE 1:20



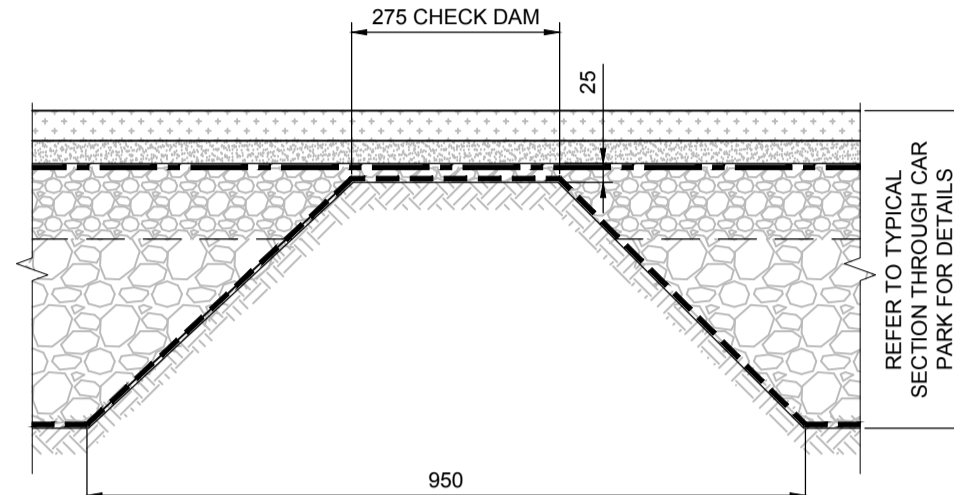
TYPICAL SECTION THROUGH FILTER TRENCH

SCALE 1:20



TYPICAL SECTION THROUGH CAR PARK

SCALE 1:10



TYPICAL SECTION THROUGH CHECK DAM

SCALE 1:10

TABLE 1: ORIFICE/FLOWS		
CAR PARK AREA	ORIFICE DIA. (mm)	FLOW (l/s)
1	19	0.7
2	26	1.2
3	31	1.8
4	34	2.1
5	37	2.5

PRIVATE DRAINAGE NOTES:

- DRAINAGE SYSTEMS TO COMPLY WITH THE FOLLOWING STANDARDS:
 - BS EN 752:2008
 - BUILDING REGULATIONS APPROVED DOCUMENT PART H, 2015 EDITION
- ALL COMPONENTS USED IN DRAINAGE SYSTEMS TO COMPLY WITH BS EN 478:2011
- ALL DRAINAGE SYSTEMS AND COMPONENTS TO BE CONSTRUCTED AND TESTED TO THE FULL SATISFACTION OF THE BUILDING REGULATIONS INSPECTOR.
- ALL DRAINAGE TO BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH BS EN 1610:2015.
- V.C. DENOTES VITRIFIED CLAY, VITRIFIED CLAY PIPES AND FITTINGS TO COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 295-1:2013, -2:2013, -3:2012 AND BS 65 RESPECTIVELY AND BE KITEMARKED. ALL PIPES SHALL BE EXTRA STRENGTH TO BS 65 OR EQUIVALENT BS EN 295 PIPE CRUSHING STRENGTH.
- PVC-U DENOTES UNPLASTICISED POLYVINYL CHLORIDE. PVC-U PIPES AND FITTINGS TO COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 401, BS EN 1478-2 AND BS 4690:1989/2000 RESPECTIVELY AND BE KITEMARKED.
- PRECAST CONCRETE MANHOLES TO BE IN ACCORDANCE WITH BS EN 1917:2002 AND BS 5911-3:2010, -4:2002 AND TO BE KITEMARKED. PRECAST CONCRETE RINGS AND COVER SLABS TO CONCRETE PIPES TO BE JOINTED WITH CEMENT MORTAR UNLESS NOTED OTHERWISE.
- INSITU AND PRECAST CONCRETE UNITS SHALL HAVE SULPHATE RESISTING PORTLAND CEMENT TO BS EN 197-1:2011.
- POLYPROPYLENE INSPECTION CHAMBERS TO COMPLY WITH BS EN 13598-1:2010, -2:2016 AND BS 7158:2001 AND TO BE KITEMARKED.
- MANHOLE COVERS AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 124-1 TO 6:2015. MANHOLE COVERS AND FRAMES TO BE OF A NON-ROCKING DESIGN WITH CUSHION INSERTS AND KITEMARKED. LOAD CLASS A15 COVERS TO BE USED IN AREAS INACCESSIBLE TO VEHICLES; LOAD CLASS D400 COVERS TO BE USED IN AREAS TRAFFICKED BY VEHICLES / PARKING BAYS. ALL COVERS TO BE BADGED 'FW' OR 'SW' AS APPROPRIATE. MANHOLE COVER SLABS AND ACCESS TO BE IN ACCORDANCE WITH CONCRETE PIPE ASSOCIATION TECHNICAL BULLETIN ISSUED SEPTEMBER 2001.
- POLYPROPYLENE INSPECTION CHAMBER COVERS AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 124-1 TO 6:2015. COVERS AND FRAMES TO BE OF A NON-ROCKING DESIGN WITH CUSHION INSERTS AND KITEMARKED. LOAD CLASS A15 COVERS TO BE USED IN AREAS INACCESSIBLE TO VEHICLES; LOAD CLASS D400 COVERS TO BE USED IN AREAS TRAFFICKED BY VEHICLES / PARKING BAYS.
- ROAD GULLY GRATES AND FRAMES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 124-1 TO 6:2015 AND BE OF A NON-ROCKING DESIGN WITH LEFT HANDED CAPTIVE HINGE ACCESS AND BE KITEMARKED. LOAD CLASS D400 GRATES TO BE USED IN AREAS TRAFFICKED BY VEHICLES / PARKING BAYS. TYPE D400 450 GRATE AND FRAME. MINIMUM AREA OF WATERWAY TO BE 1010cm².
- DRAINAGE CHANNELS TO BE ACO M1000 0.0 MULTIDRAIN CHANNEL (O.S.A) FITTED WITH SLOTTED DUCTILE IRON GRATING. GRATES SHALL COMPLY WITH THE RELEVANT PROVISIONS OF BS EN 124-1 TO 6:2015 AND BE KITEMARKED. LOAD CLASS A15 GRATES TO BE USED IN AREAS INACCESSIBLE TO VEHICLES; LOAD CLASS D400 GRATES TO BE USED IN AREAS TRAFFICKED BY VEHICLES / PARKING BAYS. SUMP UNIT AND SILT BUCKET UNITS TO BE USED ON ALL GULLIES.
- CLASS Z BEDDING DETAIL SHALL BE PROVIDED:
 - WHERE COVER TO PIPE BARREL IS:
 - i) <1.2m IN VEHICULAR TRAFFICKED AREAS
 - ii) <0.9m IN AREAS INACCESSIBLE TO VEHICLES.
 - AT ALL ROAD GULLY, YARD GULLY, RWP, SVP AND DRAINAGE CHANNEL BRANCHES.
 - AREAS OF DEEP ROOTING VEGETATION
 - WHERE TWO PIPES CROSS WITH A CLEAR GAP OF <300mm. CLASS Z SURROUND TO EXTEND A MINIMUM OF 1.0m FROM THE CENTRE OF THE CROSSING POINT & EXTENDED TO WITHIN 150mm OF THE NEAREST FLEXIBLE JOINT, WHERE REQUIRED.
- NO MECHANICAL COMPACTION OF FILL MATERIAL WITHIN 300mm OF THE CROWN OF ANY PIPE.

THE VERSIONS OF BRITISH STANDARDS AND OTHER PUBLICATIONS LISTED ABOVE ARE CURRENT AT THE TIME OF THE DRAWING ISSUE. HOWEVER IF THESE HAVE BEEN REVISED OR UPDATED THEN THE NEWER VERSIONS SHOULD BE USED. ANY DISCREPANCIES SHOULD BE NOTIFIED TO AWP IMMEDIATELY.

NOTES:

- THESE NOTES ARE INTENDED TO AUGMENT DRAWINGS AND SPECIFICATIONS. WHERE CONFLICT OF REQUIREMENTS EXIST THE ORDER OF PRECEDENCE SHALL BE AS SHOWN IN THE SPECIFICATION. OTHERWISE THE STRICTEST PROVISION SHALL GOVERN.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS AND ARCHITECTS DRAWINGS.
- DRAWINGS NOT TO BE SCALED. ALL DIMENSIONS TO BE CHECKED ON SITE BY THE CONTRACTOR. ANY DISCREPANCIES TO BE NOTIFIED TO THE ENGINEER AND FURTHER INSTRUCTIONS OBTAINED BEFORE WORK IS COMMENCED.
- THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURE AND SEQUENCE AND ENSURE THAT THE BUILDING AND ITS COMPONENTS ARE SAFE DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS WHICH MAY BE NECESSARY. SUCH MATERIAL REMAINING THE PROPERTY OF THE CONTRACTOR ON COMPLETION AND FOR ENSURING THAT THE WORKS AND ANY ADJACENT PROPERTIES ARE SAFE IN THE TEMPORARY CONDITION.

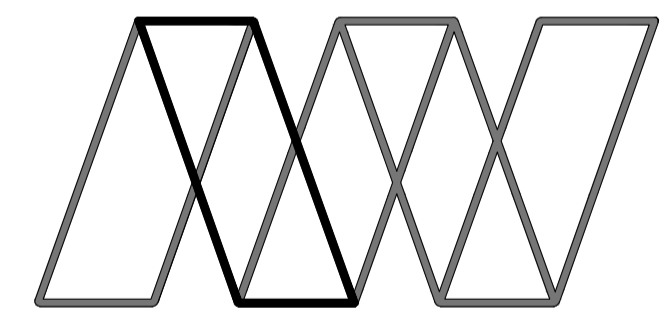
CONCRETE NOTES:

- STANDARDIZED PRESCRIBED CONCRETE:
- ALL STANDARDIZED PRESCRIBED CONCRETE TO CONFORM TO BS 8500-2:2015
 - STANDARDIZED PRESCRIBED CONCRETE MIX - ST2
 - MAXIMUM AGGREGATE SIZE - 20mm.
 - CONSISTENCY CLASS - S1.
- DESIGNATED CONCRETE:
- ALL DESIGNATED CONCRETE TO CONFORM TO BS 8500-2
 - DESIGNATION - GEN 3
 - CEMENT TYPE - SRPC
 - MAXIMUM AGGREGATE SIZE - 20mm
 - CONSISTENCY CLASS - TO BE AGREED ON SITE
 - IMMEDIATELY AFTER LAYING, CONCRETE SHALL BE PROTECTED FROM RAIN, RAPID TEMPERATURE CHANGE, FROST AND FROM DRYING OUT. ALSO MAINTAIN THE CONCRETE ABOVE 2° IN COLD WEATHER. THE METHODS USED SHALL BE IN ACCORDANCE WITH B.S. 5400, OR APPROVED BY THE ENGINEER.
 - ALL FORMWORK TO BE CLASS F.
 - ALL EXPOSED EDGES TO HAVE 20x20mm CHAMFER.

SW DRAINAGE DESIGN NOTES:

- SITE LOCATION BRIDGEHEAD NORTH, HESSLE, EAST YORKSHIRE, HU13 0JL, E:501471 N:426339.
- RAINFALL DATA:
 - TAKEN FROM FLOOD STUDIES REPORT.
 - M5-60-19.6m, RATIO R = 0.4.
- SURFACE WATER DRAINAGE SYSTEM DESIGNED FOR NO FLOODING FOR A RANGE OF STORM EVENTS OF BETWEEN 15 & 10080 MINUTES WITH A RETURN PERIOD OF 1 IN 100 YEARS WITH AN ADDITIONAL 30% CLIMATE CHANGE ALLOWANCE.
- INFILTRATION TRENCH INFILTRATION RATE TAKEN AS 1.72x10⁻⁴ m/s WHICH IS THE AVERAGE OF INFILTRATION RATES FOR TP1 & TP2 FROM B.W.B SOIL INFILTRATION TESTING, DATED 03.04.2014.
- FACTOR OF SAFETY FOR INFILTRATION = 10 - FROM CIRIA S.U.D.S MANUAL 2016, TABLE 25.5. IMPERMEABLE AREA > 1000m² AND CONSEQUENCE OF FAILURE FLOODING BUILDINGS AND ROADS.

P1	FIRST ISSUE	06.10.17	KR	JsP	-
Rev	Description	Date	By	Ck	App



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JOB NO: 39747 - DRAWING REFERENCE TABLE	
This Drawing to be Read in Conjunction with the Drawings Listed Below	
Alan Wood & Partners DRAINAGE SCHEMATIC DRAINAGE SCHEMATIC DETAILS	Drawing Reference BRID - AWP - ZZ - XX - DR - C - 0100 BRID - AWP - ZZ - XX - DR - C - 0101
Drawings by others P101 SITE PLAN 20.09.2017 (WYKELAND) 06-14223-04 REV.A TOPO. SURVEY (LSTC)	Date Received 26-09-2017 20-09-2017

Project:	ACCESS ROAD AND OVERFLOW CAR PARK, BRIDGEHEAD, HESSLE					
Client:	BRIDGELAND DEVELOPMENTS LTD.					
Drawing:	TYPICAL DRAINAGE SCHEMATIC DETAILS					
Role:	CIVIL ENGINEER					
Drawing Status:	FOR APPROVAL					
Job no.	39747	Scale@ A1:	As Noted	Rev.	P1	
Project	Originator	Volume	Level	Type	Role	Number
BRID - AWP - ZZ - XX - DR - C - 0101						