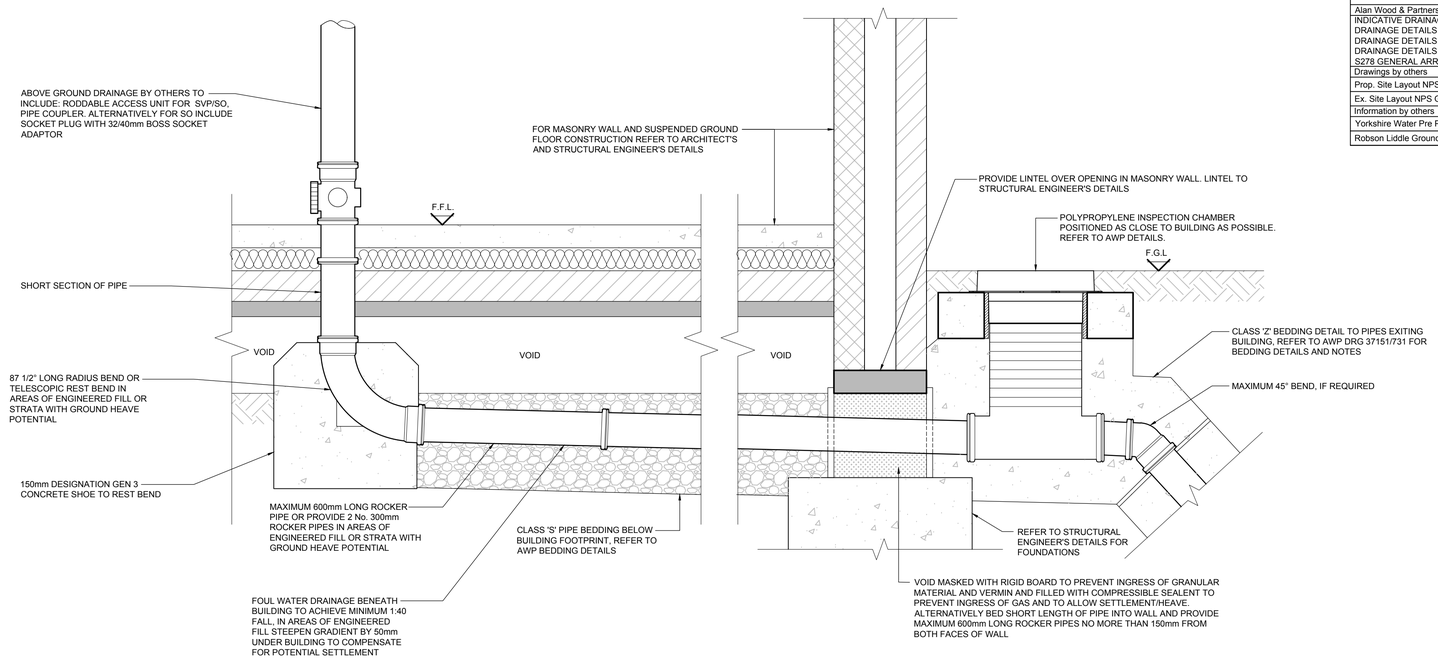
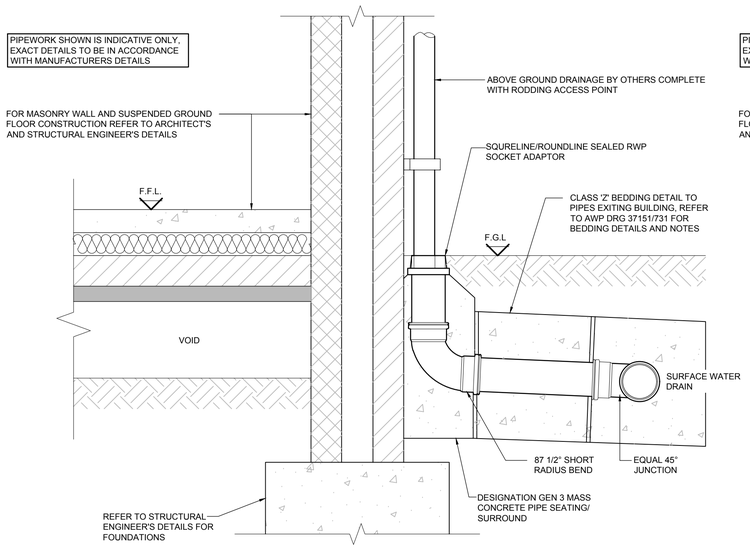


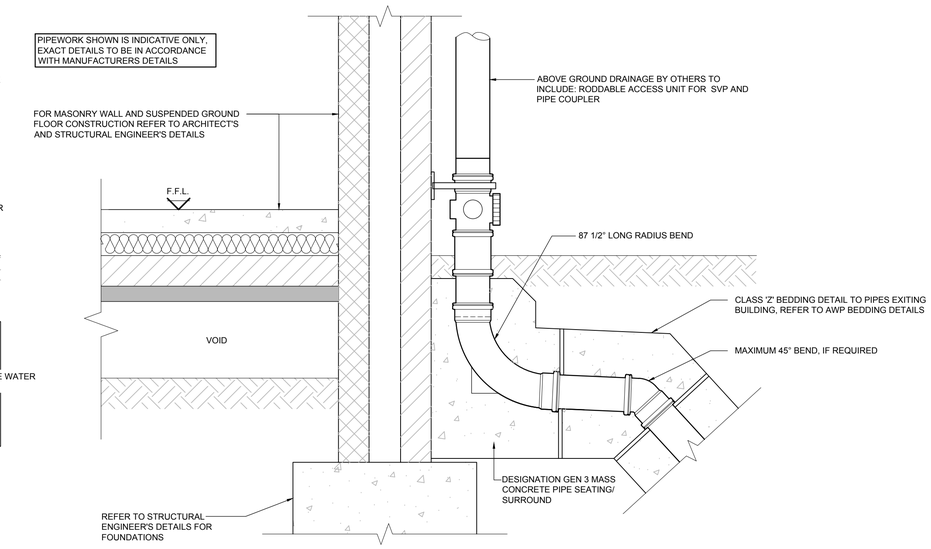

## TYPICAL INTERNAL SVP/SS/SO TO DRAIN DETAIL

FOUL - SCALE 1:10




## TYPICAL RWP TO DRAIN DETAIL

SURFACE - SCALE 1:10




## TYPICAL EXTERNAL SVP TO DRAIN DETAIL

FOUL - SCALE 1:10

100mm at A1

### JOB NO: 39490 - DRAWING REFERENCE TABLE

This Drawing to be Read in Conjunction with the Drawings Listed Below

| Alan Wood & Partners | Drawing Reference |
|---|---|
| INDICATIVE DRAINAGE LAYOUT | COB - AWP - ZZ - XX - DR - C - 0100 |
| DRAINAGE DETAILS (SHEET 1) | COB - AWP - ZZ - XX - DR - C -0101 |
| DRAINAGE DETAILS (SHEET 2) | COB - AWP - ZZ - XX - DR - C -0102 |
| DRAINAGE DETAILS (SHEET 3) | COB - AWP - ZZ - XX - DR - C -0103 |
| S278 GENERAL ARRANGEMENT | COB - AWP - ZZ - XX - DR - C - 0200 |
| Drawings by others | Date Received |
| Prop. Site Layout NPS GROUP (NPS-XX-00-DR-A-012). | 09-06-2017 |
| Ex. Site Layout NPS GROUP (NPS-XX-00-DR-A-011). | 17-05-2017 |
| Information by others | Date Received |
| Yorkshire Water Pre Plan Enquiry (ref:39490/14) | 16-05-2017 |
| Robson Liddle Ground Investigation (ref:151203/GIR1) | 17-05-2017 |

**PRIVATE DRAINAGE NOTES:**

1. DRAINAGE SYSTEMS TO COMPLY WITH THE FOLLOWING STANDARDS:
   - BS EN 752:2008
   - BUILDING REGULATIONS APPROVED DOCUMENT PART H, 2015 EDITION
   - NHBC STANDARDS CHAPTER 5.3, 2017 EDITION
   - NHBC STANDARDS PLUS, 2017
2. ALL COMPONENTS USED IN DRAINAGE SYSTEMS TO COMPLY WITH THE FOLLOWING: BS EN 476:2011
3. ALL DRAINAGE SYSTEMS AND COMPONENTS TO BE CONSTRUCTED AND TESTED TO THE FULL SATISFACTION OF BOTH BUILDING REGULATIONS AND WARRANTY PROVIDER INSPECTORS
4. ALL DRAINAGE TO BE CONSTRUCTED AND TESTED IN ACCORDANCE WITH BS EN 1610:2015.
5. V.C. DENOTES VITRIFIED CLAY, VITRIFIED CLAY PIPES AND FITTINGS TO COMPLY WITH THE RELEVANT PROVISIONS OF BS EN295-1:2013,-2:2013,-3:2012 AND BS 65 RESPECTIVELY AND BE KITEMARKED. ALL PIPES SHALL BE EXTRA STRENGTH TO BS 65 OR EQUIVALENT BS EN295 PIPE CRUSHING STRENGTH.
6. LATERAL DRAIN CONNECTIONS (PIPES CONNECTING INTO ADOPTABLE SEWERS) TO BE VITRIFIED CLAY. WHERE COVER IS LESS THAN 1.2m TO GROUND LEVEL PIPE PROTECTION IS REQUIRED IN THE FORM OF A CONCRETE COVER SLAB.
7. PVC-U DENOTES UNPLASTISED POLYVINYL CHLORIDE . PVC-U PIPES AND FITTINGS TO COMPLY WITH THE RELEVANT PROVISIONS OF BS EN1401, BS EN13476-2 AND BS4660:1989/2000 RESPECTIVELY AND BE KITEMARKED.
8. 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.
9. INSITU AND PRECAST CONCRETE UNITS SHALL HAVE SULPHATE RESISTING PORTLAND CEMENT TO BS EN 197-1:2011.
10. POLYPROPYLENE INSPECTION CHAMBERS TO COMPLY WITH BS EN 13598-1:2010,-2:2016 AND BS 7158:2001 AND TO BE KITEMARKED.
11. 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 B125 COVERS TO BE USED IN PRIVATE DRIVES; LOAD CLASS D400 COVERS TO BE USED IN PRIVATE ROADS. 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.
12. 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 B125 COVERS TO BE USED IN PRIVATE DRIVES; LOAD CLASS D400 COVERS TO BE USED IN PRIVATE ROADS.
13. 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 PRIVATE ROADS. TYPE D400:450 GRATE AND FRAME. MINIMUM AREA OF WATERWAY TO BE 1010cm².
14. YARD 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 AND BE KITEMARKED. LOAD CLASS A15 GRATES TO BE USED IN AREAS INACCESSIBLE TO VEHICLES; LOAD CLASS B125 GRATES TO BE USED IN PRIVATE DRIVES. TYPE B125:450 GRATE AND FRAME. MINIMUM AREA OF WATERWAY TO BE 900cm².
15. DRAINAGE CHANNELS TO BE ACO M100D 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 B125 GRATES TO BE USED IN PRIVATE DRIVES; LOAD CLASS D400 GRATES TO BE USED IN PRIVATE ROADS. SUMP UNIT AND SILT BUCKET UNITS TO BE USED ON ALL GULLIES.
16. 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.
   - PIPE RUNS NEAR BUILDINGS IN ACCORDANCE WITH TYPICAL SECTIONS ON AWP DRAWING 37151/731.
   - 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.
17. 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:

1. 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.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS AND ARCHITECTS DRAWINGS.
3. 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.
4. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS THE CONTRACTORS 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 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:**

DESIGNATED CONCRETE:

3. 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
4. ALL EXPOSED EDGES TO HAVE 20x20mm CHAMFER.
5. 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.
6. ALL FORMWORK TO BE CLASS F.

| Rev | Description | Date | By | Chk | App |
|---|---|---|---|---|---|
| C1 | CONSTRUCTION ISSUE | 15.08.17 | KR | TW | AR |


**Alan Wood & Partners**

**Hull Office**
**341 Beverley Road**
**Hull**
**HU5 1LD**

**T. 01482 442138**
**www.alanwood.co.uk**

**Consulting Civil & Structural Engineers**
**Project Managers**
**Building Surveyors**

Lincoln T. 01522 300210
London T. 02071 860761
Scarborough T. 01723 865484
Sheffield T. 01142 440077
York T. 01904 611594


Project: RESIDENTIAL DEVELOPMENT AT COBCAR LANE, ELSECAR

Client: NPS GROUP

Drawing: TYPICAL DRAINAGE DETAILS (SHEET 3)

Role: CIVIL ENGINEER

Drawing Status: FOR CONSTRUCTION

Job. no. 39490 | Scale@ A1: AS NOTED | Rev. C1

| Project | Originator | Volume | Level | Type | Role | Number |
|---|---|---|---|---|---|---|
| COB | AWP | ZZ | XX | DR | C | 0103 |