

GENERAL SAFETY NOTES:

1. WHERE THE BASE (ROAD BASE) HAS BEEN USED AS A TEMPORARY RUNNING SURFACE DURING THE CONTRACT IT SHALL BE THOROUGHLY CLEANED AND POWER WASHED AS NECESSARY. AFTER DRYING AND IMMEDIATELY BEFORE THE BINDER COURSE IS LAID A TACK COAT OF BITUMEN EMULSION CLASS A1-40 OR K1-40 TO BS434 SHALL BE APPLIED AT A RATE OF 0.35-0.55 LITRES/SQ METER.
2. ALL RADIUS KERBS WITH A RADIUS OF 12m OR LESS SHALL BE FORMED WITH PROPRIETARY RADIUS KERBS.

HEALTH & SAFETY:

1. CONTRACTOR SHOULD BE AWARE OF GENERAL CONSTRUCTION RISKS TO PREVENT SLIPS, TRIPS AND FALLS AND TAKE NECESSARY PRECAUTIONS WITHOUT SPECIAL INSTRUCTION.

ROADS & DRAINAGE

2. CONTRACTOR TO PROVIDE TRENCH SUPPORTS AS APPROPRIATE AND ENSURE THAT PLANT REMAINS A SAFE DISTANCE FROM TRENCHES PRIOR TO INSTALLING DRAINAGE
3. THE TIME THAT EXCAVATIONS ARE OPEN ON SITE SHOULD BE KEPT TO A MINIMUM AND ALL TRENCHES SHOULD BE SURROUNDED BY A BARRIER.
4. CONNECTIONS TO EXISTING SEWERS TO BE MADE BY APPROVED CONTRACTOR ONLY.
5. CONTRACTOR TO MAKE OPERATIVES AWARE OF ASSOCIATED DANGERS TO HEALTH SUCH AS LEPTOSPIROSIS (WEILS DISEASE) AND RECOMMENDED PRECAUTIONS. ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING TO BE PROVIDED AS REQUIRED.
6. UNFINISHED MANHOLES MUST BE COVERED WITH LOAD BEARING MATERIALS AND SURROUNDED WITH BARRIER.

PIPES & CABLES

7. CONTRACTOR TO OBTAIN ALL SERVICE RECORDS PRIOR TO WORKS COMMENCING.
8. SERVICE RECORDS TO BE REFERRED TO PRIOR TO WORK COMMENCING. CONTRACTOR TO PROCEED WITH CAUTION AND SERVICES TO BE LOCATED BY HAND DIG AND PROTECTED ACCORDINGLY.

EXCAVATION/FILL

9. CONTRACTOR TO ENSURE RELEVANT MEASURES ARE TAKEN TO KEEP PLANT AND PEOPLE A SAFE DISTANCE FROM STEEP SLOPES DURING THE WORKS.
10. CONTRACTOR TO ENSURE THAT PROCEDURES ARE IN PLACE TO KEEP PEOPLE A SAFE DISTANCE FROM WORKING PLANT WHERE NECESSARY.
11. CONTRACTOR TO REFER TO GROUND INVESTIGATION REPORT FOR CONTAMINATION TESTS AND TO PROVIDE ADEQUATE WELFARE FACILITIES AND PROTECTIVE CLOTHING AS REQUIRED.

PIPE MATERIALS

- **100-225Ø: UPVC PIPES TO BE BSI KITEMARKED AND CERTIFIED TO WIS 4-35-01 & BS/EN13476.**

DRAINAGE SUMMARY:

SURFACE WATER

- SURFACE WATER IS RESTRICTED TO 3L/S.
- SURFACE WATER IS TO DISCHARGE INTO THE EXISTING SURFACE WATER SEWER
- ATTENUATION FOR ALL STORM EVENTS UP TO AND INCLUDING 100YR STORM EVENT +45% CLIMATE CHANGE AND 10% CREEP IS TO BE PROVIDED BY AN ON-LINE CELLULAR STORAGE CRATE.
- HIGHWAY DRAINAGE TO DISCHARGE VIA PRIVATE NETWORK
- FINAL DISCHARGE POINT TBC, CONTRACTOR TO UNDERTAKE S106 AGREEMENT

FOUL WATER

- FOUL WATER IS TO DISCHARGE INTO EXISTING ADOPTED NWL COMBINED SEWER
- FINAL DISCHARGE POINT TBC, CONTRACTOR TO UNDERTAKE S106 AGREEMENT

DESIGN NOTES:

1. ALL WORKS TO COMPLY WITH CURRENT VERSION OF THE FOLLOWING DOCUMENTS:
   - DESIGN MANUAL FOR ROADS AND BRIDGES (DMRB)
   - SPECIFICATION FOR HIGHWAY WORKS (SHW)
   - LOCAL AUTHORITY DESIGN GUIDE AND SPECIFICATION
2. PRIOR TO COMMENCING WORKS THE CONTRACTOR SHOULD INVESTIGATE AND LOCATE AS NECESSARY ANY STATUTORY UNDERTAKERS EQUIPMENT WITHIN THE NEW ACCESS AND DISCUSS REQUIREMENTS FOR LOWERING/DIVERSION AND PROTECTION WITH THE RELEVANT UNDERTAKER.
3. ALL WORKS WITHIN THE PUBLIC HIGHWAY TO MEET LOCAL AUTHORITY REQUIREMENTS. CONTRACTOR TO APPLY FOR ROAD OPENING NOTICES ETC AS REQUIRED.
4. CBR VALUE NOT AVAILABLE. ROAD CONSTRUCTION DETAIL SUBJECT TO CONFIRMATION OF CBR VALUES. CONTRACTOR TO ALLOW FOR LAB TESTS TO BE UNDERTAKEN IN AGREEMENT WITH LOCAL AUTHORITY HIGHWAY ENGINEER PRIOR TO WORKS COMMENCING.
5. PROPOSED LEVELS HAVE BEEN BASED ON THE EXISTING TOPOGRAPHICAL SURVEY PROVIDED BY THE CLIENT
6. PROPOSED DRAWING BASED ON THE LATEST ARCHITECTURAL LAYOUT PROVIDED BY THE CLIENT.
7. SLOPES GREATER THAN 1 IN 6 MAY REQUIRE STABILISATION. GEOTECHNICAL ENGINEER TO BE CONTACTED TO CONFIRM REQUIREMENTS

DRAINAGE NOTES:

1. ALL PIPES 100Ø UNLESS OTHERWISE STATED.
2. ALL PRIVATE TO ADOPTABLE CONNECTIONS 150Ø UNLESS OTHERWISE STATED.
3. ALL PPIC'S IN TRAFFICKED AREAS TO HAVE D400 COVERS & CONCRETE SURROUND.
4. ALL INTERNAL PLOT DRAINAGE REQUIRES CONFIRMATION PRIOR TO CONSTRUCTION.
5. CONTRACTOR TO CONFIRM MH COVER & INVERT LEVEL OF PROPOSED CONNECTION POINT PRIOR TO CONSTRUCTION. ANY VARIATION TO BE REPORTED TO ENGINEER.
6. THE INVERT LEVEL OF THE EXISTING SEWERS ARE TO BE VERIFIED PRIOR TO COMMENCEMENT OF ANY DRAINAGE WORKS. ANY DISCREPANCY MUST BE NOTIFIED TO THE ENGINEER.
7. EXISTING MANHOLES TO BE MODIFIED TO ACCOMMODATE THE PROPOSED LATERAL CONNECTIONS. CONTRACTOR TO APPLY TO THE WATER AUTHORITY FOR THE SECTION 106 APPROVAL TO MAKE THE CONNECTIONS. PIPES ARE TO BE LAID WITH COMMON INVERT LEVELS.
8. ALL STUB PIPES ARE TO BE CAPPED.
9. ALL PIPES CONNECTIONS TO BE SOFFIT TO SOFFIT UNLESS STATED OTHERWISE. REFER TO MANHOLE SCHEDULE FOR FURTHER INFORMATION.
10. ALL PROPOSED FILTER DRAINS TO CONNECT BACK INTO PLOT DRAINAGE.

RAINFAll volumes

FIRST 5mm RAINFALL VOLUME
SITE AREA 3890m^2 @ 5mm DEEP = 19.45m^3

ATTENUATION VOLUME IN STONE
DRIVE AREA 620m^2 @ 350mm DEEP = 217m^3 @30% VOIDS = 65.1m^3

SUBJECT TO LOCAL AUTHORITY & WATER AUTHORITY APPROVAL

DRAINAGE AREAS

PIPE NODE	AREA (ha)
1.000	0.014
1.001	0.000
1.002	0.041
2.000	0.007
2.001	0.023
3.000	0.005
2.002	0.018
1.003	0.000
1.004	0.000
1.005	0.000
1.006	0.010
1.007	0.010
1.008	0.015
1.009	0.040
1.010	0.000
1.011	0.000
	0.183

Date	Revisions	Drawn	Checked	Rev
19.12.2023	FIRST ISSUE	AM	RWO	1

Dwg Status: SCHEMATIC

NORTH EAST
0191 2585632

YORKSHIRE
0113 535 3500

RWO
CONSULTING ENGINEERS

WWW.RWO.GROUP
INFO@RWO.GROUP

Client: ORIGIN PLANNING SERVICES

Project: SIMONSIDE ARMS

Title: DRAINAGE AREAS

DO NOT SCALE	Scale @ A1: 1:200	Drawn AM	Checked RWO	Date 19.12.2023
Job No 22164		Dwg No D202		Rev 1