DESIGN RISK NOTES:

1. IN ACCORDANCE WITH THE CONSTRUCTION (DESIGN & MANAGEMENT) REGULATIONS 2015, IT IS THE PRACTICE OF THIS PRACTICE TO 'DESIGN OUT' AS MANY IDENTIFIABLE RISKS AS POSSIBLE FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF THE PROJECT.
2. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE PRE CONSTRUCTION INFORMATION WHICH IS DEFINED IN THE CONSTRUCTION (DESIGN & MANAGEMENT) REGULATIONS 2015.
3. A COMPETENT CONTRACTOR SHOULD BE AWARE OF 'NORMAL' RISKS INVOLVED WITH THE CONSTRUCTION PROCESS. HOWEVER ADDITIONAL PRECAUTIONS WILL NEED TO BE CONSIDERED FOR THE FOLLOWING ITEMS:
   A) NONE IDENTIFIED.
4. SAFE METHODS AND SYSTEMS OF WORK REMAIN THE RESPONSIBILITY OF THE CONTRACTOR AND MUST BE IDENTIFIED IN THE CONSTRUCTION PHASE PLAN. THE CONSTRUCTION PHASE PLAN MUST BE IN PLACE PRIOR TO THE START OF ANY MOBILIZATION OR SITE WORKS.
5. RESIDUAL RISKS THAT HAVE BEEN IDENTIFIED AND CANNOT BE 'DESIGNED OUT' ARE AS FOLLOWS:
   A) NONE IDENTIFIED.
6. IF ANY PARTY USING THIS DRAWING CONSIDERS THAT THERE ARE 'ABNORMAL' RISKS THAT HAVE NOT BEEN IDENTIFIED ABOVE, THEN THE ENGINEER SHOULD BE NOTIFIED.

ADDITIONAL HEALTH & SAFETY NOTES:

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

ROADS & SEWERS

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.

EXCAVATIONS

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.
12.

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 VALUE BY SITE INVESTIGATION TO BE CARRIED OUT BY CONTRACTOR 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 1IN 4 MAY REQUIRE STABILISATION. GEOTECHNICAL ENGINEER TO BE CONTACTED TO CONFIRM REQUIREMENTS

DRAINAGE NOTES:

1. ALL PIPES 100Ø UNLESS OTHERWISE STATED.
2. ALL PRI-ATE TO ADOPTABLE CONNECTIONS 150Ø UNLESS OTHERWISE STATED.
3. ALL PRCS 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 WORKS. ANY VARIATION TO BE REPORTED TO ENGINEER. IF THE INVERT LEVELS OF THE 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.
7. ALL STUB PIPES ARE TO BE CAPPED.
8. ALL PPRC CONNECTIONS TO BE SOFFIT TO SOFFIT UNLESS STATED OTHERWISE. REFER TO MANHOLE SCHEDULE FOR FURTHER INFORMATION.

PIPE MATERIALS (YORKSHIRE WATER):

- **150-225Ø: UPVC PIPES TO BE BSI KITEMARKED AND CERTIFIED TO WIS 4-35-01 & BS/EN13476.**
- **300-600Ø: HDPE PIPES TO BE BSI KITEMARKED AND CERTIFIED TO WIS 4-35-01 & BS/EN13476.**
- **675-1500Ø: CONCRETE PIPES TO BE BSI KITEMARKED, CLASS 120 CONCRETE & CERTIFIED TO BS5911 & 1916.**

PIPE MATERIALS (IMBC):

- **150-225Ø: VITRIFIED CLAY TO BE BSI KITEMARKED AND CERTIFIED TO: BS EN 295.**
- **300-1500Ø: CONCRETE PIPES TO BE BSI KITEMARKED, CLASS 120 CONCRETE & CERTIFIED TO BS5911 & 1916.**

SUBJECT TO LOCAL AUTHORITY & WATER AUTHORITY APPROVAL

DRAINAGE SUMMARY:

EXISTING DRAINAGE

- THERE IS A COMBINED SEWER CROSSING SITE. SEWER SIZE AND INVERT LEVELS ARE TO BE CONFIRMED

SURFACE WATER

- SURFACE WATER FROM SITE IS TO DISCHARGE INTO THE EXISTING WATERCOURSE ALONG SOUTHERN BOUNDARY OF SITE AT RESTRICTED RATE.
- RUNOFF FROM NORTHERN PARTS OF SITE IS TO DISCHARGE INTO BASIN 1 AND BASIN 2 WHERE IT IS TO BE RESTRICTED TO 28L/S AND 27L/S IN A 100 YEAR + 40% CLIMATE CHANGE STORM
- RESTRICTED DISCHARGE FROM BASIN 1 AND BASIN 2 AND RUNOFF FROM SOUTHERN SITE IS TO DISCHARGE INTO BASIN 3 WHERE IT IS TO BE RESTRICTED TO 92.8L/s AND DISCHARGE INTO WATERCOURSE
- SURFACE WATER ATTENUATION FOR ALL STORM EVENTS UP TO AND INCLUDING 100YR STORM EVENT +40% CLIMATE CHANGE AND 10% CREEP IS TO BE PROVIDED VIA 3 NO. BASINS.
- ALL MAIN DRAINAGE TO BE OFFERED FOR ADOPTION VIA S104 AGREEMENT
- ALL DRAINAGE SUBJECT TO DETAILED DESIGN

FOUL WATER

- FOUL WATER FROM PROPOSED DEVELOPMENT IS TO DISCHARGE INTO THE EXISTING COMBINED SEWER CROSSING THE SITE VIA A CONNECTION INTO EXISTING MANHOLE MH3.
- AN ALLOWANCE HAS BEEN MADE FROM FOUL FLOWS ENTERING SITE FROM AREA OF L12 LOCATED TO WEST OF DEVELOPMENT SITE.
- THE AREA OF L12 LOCATED TO NORTH OF DEVELOPMENT SITE CAN DISCHARGE DIRECTLY INTO THE COMBINED SEWER WITHIN L12 NORTH OF THE DEVELOPMENT SITE

Date	Revisions	Drawn	Checked	Rev
29.07.2026	KEY AMENDED, PLOT DRAINAGE ADDED	JF	AE	2
06.07.2026	FIRSTT ISSUE	NA	AE	1

Dwg Status: TENDER

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YORKSHIRE
0113 535 3500

RWO CONSULTING ENGINEERS

WWW.RWO.GROUP
INFO@RWO.GROUP

Client
VISTRY GROUP

Project
SHAW LANE
CARLTON

Title
PROPOSED S104 PLAN
OVERALL LAYOUT

DO NOT SCALE	Scale @ A0: 1:500	Drawn NA	Checked AE	Date 02.07.2026
Job No 24307		Dwg No D803		Rev 2