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GENERAL NOTES:

1. DO NOT USE THIS DRAWING IN ISOLATION. THIS DRAWING HAS BEEN PREPARED AS PART OF A SET, AND MUST THEREFORE BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORKS.
2. THIRD PARTY INFORMATION IS USED TO PREPARE THE ENGINEERING DESIGN. THIS INCLUDES, BUT IS NOT LIMITED TO, TOPOGRAPHICAL SURVEYS, UNDERGROUND UTILITIES RECORDS, AND SPECIALIST DESIGN ITEMS. THE ENGINEERING DESIGN MUST THEREFORE BE READ IN CONJUNCTION WITH ALL THIRD PARTY INFORMATION PRIOR TO COMMENCING WORK. QUEENSBERRY DESIGN LTD ARE NOT RESPONSIBLE FOR ANY THIRD PARTY INFORMATION OR DETAILS
3. DRAWING STATUS WILL REMAIN PRELIMINARY UNTIL FULL TECHNICAL APPROVAL IS RECEIVED FROM LOCAL AUTHORITY AND SEWERAGE UNDERWATER. WORKS PROGRESSED PRIOR TO TECHNICAL APPROVAL ARE DONE SO AT RISK AND MAY BE SUBJECT TO CHANGE.
4. THE CONTRACTOR IS EXPECTED TO PREPARE APPROPRIATE CONSTRUCTION METHOD STATEMENTS FOR ALL ASPECTS OF APPOINTED WORK. THIS SHOULD INCLUDE ANY TEMPORARY PROTECTION / WORKS.
5. ALL PROPERTIES ARE EXPECTED TO DISCHARGE INTO THE PUBLIC SEWER NETWORK. ANY NEED FOR LAND DRAINAGE SHOULD BE ASSESSED BY THE GROUND WORKER AND LANDSCAPER DURING CONSTRUCTION AND PLACEMENT OF GARDENS ON AN INDIVIDUAL PLOT BASIS. IF LAND DRAINAGE DESIGNS ARE REQUIRED, THEY SHOULD BE APPOINTED PRIOR TO PLOT COMPLETION.
6. THE CONTRACTOR IS EXPECTED TO CARGO CHECK ALL DRAINAGE INVERTS PRIOR TO COMMENCING WORK. THIS MAY INVOLVE COMPLETION OF TRIAL HOLES IF INVERT LEVELS ARE NOT AVAILABLE FROM A SURVEY. ALL INVERTS OF ANY NEW OR EXISTING DRAINAGE APPARATUS SHOULD BE CONFIRMED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORKS. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER IMMEDIATELY.
7. THE CONTRACTOR MUST MONITOR THE "AS BUILT" PROGRESS OF EACH CONSTRUCTION STAGE (ROADS/SEWERS/PLOT WORKS ETC) TO ENABLE THE NEXT STAGES OF CONSTRUCTION TO BE CHECKED BEFORE INSTALLATION.

HIGHWAYS

1. ALL HIGHWAY WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT LOCAL AUTHORITY DESIGN GUIDE AND SPECIFICATION.
2. ALL EXCAVATIONS BELOW PROPOSED AND EXISTING HIGHWAYS TO BE BACK FILLED WITH TYPE 1 SUB BASE TO BE COMPACTED IN LAYERS NOT EXCEEDING 150MM, UNLESS OTHERWISE AGREED.
3. HIGHWAY AUTHORITY TO BE NOTIFIED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS.

ADOPTABLE DRAINAGE

1. ALL ADOPTABLE SEWER WORKS AND MATERIAL TO BE IN ACCORDANCE WITH "CODE FOR ADOPTION", THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATERS STANDARDS/SUBSTANTIATED/EQUIVALENT TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND ATTENWRITE.
2. ALL MANHOLE COVERS TO HAVE A CLEAR OPENING OF 600MM AND SHALL BE CLASS D400 TO BS EN 124 WITH 150MM DEEP FRAMES IN HIGHWAYS.
3. FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.
4. YORKSHIRE WATER IS **NOT** OBLIGED TO ACCEPT FILTER DRAINLAND DRAINAGE IN ROAP INTO THE PUBLIC SEWER NETWORK. ALTERNATIVE METHODS OF DISPOSAL MUST BE PROPOSED. AN ALTERNATIVE METHOD OF DISPOSAL OF THE LAND DRAINAGE IN ROAP WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIASE WITH THE LOCAL AUTHORITY, LAND DRAINAGE BOARD AND ENVIRONMENT AGENCY TO ENSURE THAT THE DISPOSAL METHOD IS ACCEPTABLE.
5. COVERS AND FRAMES MUST CARRY THE DEI KITEMARK OR THEY WILL BE REJECTED BY A YORKSHIRE WATER INSPECTOR. WHERE THE CLEAR OPENING OF THE KITEMARKED PRODUCT IS DIFFERENT TO THAT OF THE COVER AND FRAME, A LOADING BEARING SLAB SHOULD BE FITTED ABOVE THE COVER SLAB TO BRING THE SIZE DOWN TO 600MM X 600MM FOR THE YORKSHIRE WATER INSPECTOR TO ACCEPT. THIS SLAB MUST BE SUPPORTED ON THE MANHOLE CHAMBER WALLS. TECHNICAL BULLETIN ISSUED AUTUMN 2004 FOR KITEMARKED COVER SLAB OPENING SIZES.
6. SULPHATE RESISTANT CEMENT (**CEM-DC2**) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
7. ALL ADOPTABLE SEWERS SHOULD BE A MINIMUM OF 1M AND MANHOLES 0.5M FROM KERB FACES AND SERVICE WARDS.
8. SEWERS MUST HAVE 5 METRES CLEARANCE FROM TREES AND HEDGES.
9. SEWERS TO BE LAID IN CLASS "S" BEDDING (**100MM GRANULAR BED AND SURROUND**). WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2M IN HIGHWAYS AND VERGES (**OR** 1.0M IN GARDENS) THE SEWER SHOULD BE ENCASED IN 150MM THIN A CONCRETE SLAB SHOULD BE PROVIDED ABOVE GRANULAR BED AND SURROUND.
10. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENT OF WATER INDUSTRY SPECIFICATION CLASS "S" BEDDING.
11. THE DIAMETER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
12. YORKSHIRE WATER POLICY IS THAT TYPE "C" BRICK MANHOLES AND 1500MM DIA MANHOLE RINGS ARE NOT PREFERRED. INSTEAD IT IS PREFERRED THAT YOU USE A TYPE "B" MANHOLE. WHERE DEPTH OF COVER TO PIPE INVERT IS > 1.5M THE PIPEWORK SHOULD BE SITED OVER THE CHAMBER. WHERE DEPTH OF COVER TO PIPE INVERT IS > 1.5M
13. ADOPTABLE PLASTIC SEWER PIPES TO BE BSI KITEMARKED (**CERTIFIED TO WIS 4-35-01 AND 02 BEARINGS**). ADOPTABLE PLASTIC SEWER PIPES TO BE LAID IN MAXIMUM 2 METRE LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER LENGTHS. PLASTIC PIPEWORK SHOULD BE LAID STRAIGHT BETWEEN MANHOLES. ADOPTABLE PLASTIC SEWERS PREFER CURVARE CHAMBER. IN BANKSIDE, SEE HAS FOUND THAT PLASTIC CHAMBERS ARE DIFFICULT TO SET IN CONCRETE BECAUSE THEY FLOAT AND A SATISFACTORY FINISH CANNOT BE OBTAINED ON THE BENCHING.
14. THE MINIMUM CRUSHING STRENGTH FOR CLAY PIPES SHOULD BE AS FOLLOWS: 100MM DIA. 3.6KN/M2 (SOLID) 3.6KN/M2 (PERFORATED) 150MM DIA. 2.4KN/M2 (SOLID) 2.4KN/M2 (PERFORATED) CRUSHING STRENGTH FOR CONCRETE PIPES SHOULD BE: CLASS 120 (120 N/M2)(BS 5911-3 2002). PLASTIC PIPES SHOULD CONFORM TO WIS 4-35-01 AND BS EN14615.
15. WHERE A SUDS COVER AND FRAME HAS BEEN APPROVED, THIS **MUST** BE COATED IN PLASTIC AND MUST HAVE LIFTING EYES SUITABLY SIZED TO ACCOMMODATE STANDARD LIFTING KEYS. SEWER DOWN COVERS ARE NOT ACCEPTABLE.

EXISTING SERVICES

PRIOR TO THE COMMENCEMENT OF ANY WORKS UNDER GROUND MAPPING SURVEYS AND CONTRACTORS PLANS TO BE REFERED TO ANY DISCREPACIES AND TO BE REPORTED TO ENGINEER.

ANY EXISTING SERVICES WHICH MAY BE AFFECTED BY THE PROPOSED WORKS SHOULD BE LOCATED BY MEANS OF A HAND DIG IN CLOSE LIAISON WITH THE STATUTORY SERVICE AUTHORITIES. ANY ADDITIONAL WORKS OR ALTERATIONS TO THE PROPOSED WORKS THAT MAY AFFECT THE PROPOSED DESIGN, CONTRACTOR TO NOTIFY STATUTORY SERVICE AUTHORITIES PRIOR TO COMMENCEMENT OF WORK. AS CONSTRUCTED INFORMATION IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE THE FOLLOWING AS CONSTRUCTED DRAWINGS TO THE DEVELOPER UPON THE COMPLETION OF THE WORKS COVERED BY THE CONTRACT:

1. POSITIONS/COORDINATES OF ALL ADOPTABLE MANHOLES.
2. POSITIONS/COORDINATES OF ALL ADOPTABLE MANHOLES.
3. NEW GULLY POSITIONS AND CONNECTIONS.
4. POSITION AND DEPTH OF SERVICE DUCTS FOR WATER, GAS, ELECTRIC, BT, CABLE AND STREET LIGHTING, STATING SIZE AND NUMBER OF DUCTS.

Rev.	Date	Revision Details	Drawn	Checked
B	16.01.23	PLOTS AND LEVELS UPDATED DUE TO LAYOUT CHANGE - LEVEL DESIGN REVISED SOUTHERN BOUNDARY	JP	ND
A	27.10.21	FIRST ISSUE	ND	ND

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SHEET 2

Drawn	Checked	Date
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