

GENERAL NOTES:

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1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. DESIGN BASED ON TOPOGRAPHICAL SURVEY AND CCTV SURVEY INFORMATION AVAILABLE AT THE TIME OF DESIGN.
4. ALL DRAINAGE WORKS TO BE IN ACCORDANCE WITH THE CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY (CESWI) AS INCLUDED IN SEWERS FOR ADOPTION 7th EDITION, THE REQUIREMENTS OF APPROVED DOCUMENT H (2002 EDITION) AND BUILDING REGULATIONS 2000.
5. ALL DIMENSIONS ARE IN METRES AND LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.
6. IT IS ADVISED THAT THE CONTRACTOR SURVEY RETAINED EXISTING DRAINAGE PRIOR TO COMMENCEMENT TO CONFIRM LOCATION AND CONDITION. POTENTIAL PRE-CLEANSING TO BE UNDERTAKEN IN ORDER TO FACILITATE SURVEY IF REQUIRED.
7. EXISTING SEWER LOCATIONS WHERE THE PROPOSED DRAINAGE IS TO CONNECT, ARE TO BE SURVEYED AND EXACT LEVELS CONFIRMED AND PROVIDED TO ENGINEER PRIOR TO COMMENCEMENT OF WORKS.
8. ALL EXISTING SERVICES TO BE LOCATED PRIOR TO COMMENCEMENT OF ANY DRAINAGE WORKS, AND WHERE NECESSARY PROTECTION OR DIVERSIONS TO BE UNDERTAKEN TO AVOID CONFLICT WITH THE PROPOSED WORK.
9. ALL EXISTING DRAINS TO BE ABANDONED SHALL BE EITHER REMOVED OR GROUDED UP IF NOT POSSIBLE. GROUTING TO BE PERFORMED BY CAPPING ALL ENDS / CONNECTIONS AND FILLING THE RETAINING VOID WITH GROUT, IN ACCORDANCE WITH CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION (CESWI) 7TH EDITION.
10. ALL SOFT SPOTS TO BE REMOVED FROM BOTTOM OF EXCAVATIONS AND TO BE REFILLED TO FORMATION LEVEL IN ACCORDANCE WITH GROUNDWORKS SPECIFICATIONS.
11. RAISED GROUND MUST BE FILLED IN ACCORDANCE WITH GROUNDWORKS SPECIFICATIONS AND CONSOLIDATED BEFORE ANY SEWER WORKS ARE CARRIED OUT.
12. ALL ADOPTABLE DRAINAGE WORKS INCLUDING WORKS TO EXISTING PUBLIC SEWERS TO BE UNDERTAKEN IN ACCORDANCE WITH "SEWERS FOR ADOPTION 7th EDITION" AND "CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION" AND CONSTRUCTED TO THE RELEVANT STATUTORY UNDERTAKERS DETAILS.
13. ALL PRIVATE DRAINAGE WORKS TO BE IN ACCORDANCE WITH "CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY 7th EDITION", BS EN 752 2017 'DRAIN AND SEWER SYSTEMS OUTSIDE BUILDINGS' AND THE BUILDING REGULATIONS APPROVED 'DOCUMENT H'.
14. TOP PIPE ≤ 300mm BELOW UNDERSIDE OF STRUCTURAL SLAB
 - 100mm TO 150mm DIAMETER; SHALL BE HEPWORTH SUPERSLEVE VITRIFIED CLAY PIPES AND FITTINGS TO BS EN 295 WITH CLASS Z BED AND SURROUND CAST INTEGRAL WITH THE SLAB.
 - 225mm TO 300mm DIAMETER; SHALL BE HEPWORTH HEPSLEVE VITRIFIED CLAY PIPES AND FITTINGS TO BS EN 295 WITH CLASS Z BED AND SURROUND CAST INTEGRAL WITH THE SLAB.
 - > 300mm DIAMETER; SHALL BE CLASS M CONCRETE PIPES AND FITTINGS TO BS EN 1916 & BS 5911:PART 1 WITH CLASS Z BED AND SURROUND CAST INTEGRAL WITH THE SLAB.
 - TOP PIPE > 300mm BELOW UNDERSIDE OF STRUCTURAL SLAB
 - 100mm TO 150mm DIAMETER; SHALL BE HEPWORTH SUPERSLEVE VITRIFIED CLAY PIPES AND FITTINGS TO BS EN 295 WITH CLASS S SURROUND.
 - 225mm TO 300mm DIAMETER; SHALL BE HEPWORTH HEPSLEVE VITRIFIED CLAY PIPES AND FITTINGS TO BS EN 295 WITH CLASS S SURROUND.
 - > 300mm DIAMETER; SHALL BE CLASS M CONCRETE PIPES AND FITTINGS TO BS EN 1916 & BS 5911:PART 1 WITH CLASS S SURROUND.
 - EXTERNAL AREAS:
 - 100mm TO 300mm DIAMETERS SHALL BE HEPWORTH HEPSLEVE VITRIFIED CLAY PIPES OR SIMILAR AND FITTINGS TO BS EN1401 WITH CLASS S SURROUND. TO BE LAID IN MAX 3M LENGTHS.
 - > 300MM DIAMETER; SHALL BE CLASS M CONCRETE PIPES AND FITTINGS TO BS EN 1916 & BS 5911:PART 1 WITH CLASS S SURROUND.
15. ALL PIPE DIAMETERS GIVEN ARE NOMINAL INTERNAL PIPE DIAMETERS.
16. PIPE MATERIALS IN ACCORDANCE WITH THE FOLLOWING:
 - ALL VITRIFIED CLAY PIPES TO BS EN 295-1;
 - ALL CONCRETE PIPES TO BE TO BS EN 1916.
 - ALL CONCRETE MANHOLES TO BE TO BS EN1917.
17. ALL ADOPTABLE DRAINAGE PIPES WILL REQUIRE A MINIMUM OF 1200mm COVER, IN ACCORDANCE WITH SEWERAGE UNDERTAKERS REQUIREMENTS.
18. ALL PRIVATE DRAINAGE PIPES WITH A COVER OF LESS THAN 600mm IN NON-TRAFFICKED AREAS AND LESS THAN 900mm IN TRAFFICKED AREAS TO BE BEDDED AND SURROUNDED IN CONCRETE (CLASS Z), COMPRESSIBLE MATERIAL SHALL BE PROVIDED AT EVERY PIPE JOINT. WHERE COVER EXCEEDS THIS DEPTH, PIPES ARE TYPICALLY BEDDED AND SURROUNDED IN CLASS S. REFER TO PIPE EMBEDMENT DETAILS DRAWING FOR SPECIFIC TYPES.
19. BACKFILL TO DRAINAGE TRENCHES UNDER HARDSTANDING AREAS TO BE TYPE 1 SUB BASE MATERIAL, ELSEWHERE BACKFILL TO BE FREE DRAINING READILY COMPATIBLE MATERIAL FREE FROM DETRITUS, ORGANIC MATTER, FROZEN SOIL CLAY LUMPS AND LARGE STONES. TO BE COMPACTED IN LAYERS NOT EXCEEDING 150mm THICK.
20. BEDDING AND BACKFILL MATERIALS TO CONFORM TO THE REQUIREMENTS OF WIS 4-08-02 (TABLE A2).
21. WHERE FOUL SEWERS RUN ABOVE SURFACE SEWERS, CONCRETE PROTECTION MAY BE REQUIRED AT CROSSOVERS TO PREVENT ANY POTENTIAL CONTAMINATION.
22. THE FIRST PIPE OUT OF MANHOLES TO BE AS SHORT AS PRACTICABLE SO AS TO PROVIDE A FLEXIBLE JOINT AS CLOSE AS POSSIBLE TO THE OUTSIDE FACE OF THE CONCRETE SURROUND AND CONNECTED TO A LENGTH OF ROCKER PIPE.
23. ALL CONNECTIONS PASSING THROUGH BASES OR EDGE BEAMS TO BE IN SEALED SLEEVES. ALTERNATIVELY CONNECTIONS MAY BE CAST-IN WITH FLEXIBLE JOINTS NOT GREATER THAN 150MM FROM FACE OF CONCRETE.
24. WHERE DRAINAGE PIPES ARE LESS THAN 300mm BELOW THE UNDERSIDE OF THE GROUND FLOOR SLAB, CONCRETE ENCASEMENT IS REQUIRED (CLASS Z). COMPRESSIBLE JOINTS ARE TO BE PROVIDED AT EVERY PIPE JOINT WITHIN THE CONCRETE.
25. WHERE PIPES ARE MORE THAN 300mm BELOW THE UNDERSIDE OF THE SLAB, CLASS S BEDDING IS ACCEPTABLE.
26. SEWER PIPES TO BE LAID IN MAXIMUM 3 METRE LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER LENGTHS.
27. PLASTIC CHANNEL SECTIONS WILL NOT BE PERMITTED WITHIN MANHOLE CHAMBERS. CLAYWARE CHANNELS SHALL BE USED WITHIN MANHOLES FOR PIPE SIZES UP TO AND INCLUDING 300mm DIAMETER.
28. ALL NEW CONNECTIONS INTO EXISTING MANHOLES (OR INTO EXISTING SEWERS) TO BE 'SOFFITS LEVEL' UNLESS OTHERWISE NOTED.
29. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED TO PROVE THAT SUCH PRECAUTIONS ARE NOT REQUIRED.
30. SEWERS MUST HAVE 5m CLEARANCE FROM TREES AND HEDGES OR TO HAVE SUITABLE ROOT PROTECTION IN ACCORDANCE WITH SFA REQUIREMENTS.
31. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED TO ACCOMMODATE THE CONNECTIONS AND BENDS.
32. ALL INTERNAL DRAINAGE CONNECTIONS ARE PROVIDED TO THE PENETRATION POSITIONS SHOWN ON ARCHITECT AND M&E DRAWINGS. REFER TO DIMENSIONED LOCATIONS ON ARCHITECTS GROUND FLOOR SETTING-OUT PLANS.
33. RAINWATER AND FOUL WATER POP UP LOCATIONS AND SIZES TO BE CONFIRMED BY ARCHITECT AND M&E ENGINEER.
34. ALL UNDERGROUND FOUL DRAINAGE SHOULD BE SUITABLY VENTED AT OR NEAR TO THE HEAD OF RUNS.
35. ALL ACCESS FITTINGS, STACKS, RWP'S AND GULLIES TO BE RODDABLE. ALL TO HAVE LOW LEVEL RODDING ACCESS PLATES UNLESS AN ALTERNATIVE MEANS OF ACCESS IS AGREED. ACCESS POINT TO BE ABOVE ANY GROUND FLOOR CONNECTED APPLIANCE SPILL LEVEL.
36. LARGE ACCESS FITTING REQUIRED ABOVE GROUND WHERE GREATER THAN 12M UP TO 22M TO A JUNCTION. SMALL ACCESS FITTING REQUIRED UP TO 12M TO A JUNCTION.
37. ALL GULLY AND CHANNEL DRAIN OUTLETS AND TERMINATION POINTS TO BE TRAPPED AND RODDABLE. INTERNAL GULLIES AND CHANNEL DRAINS TO BE SPECIFIED BY OTHERS.
38. ALL BRANCH CONNECTIONS TO BE MADE WITH SWEEP BENDS IN THE DIRECTION OF FLOW IN THE MAIN SEWER.
39. WHERE NO WC'S ARE CONNECTED UPSTREAM, UNDERSLAB FW DRAINAGE TO BE LAID AT 1:40 MIN. AFTER THE CONNECTION OF AT LEAST 1NO WC, A MIN. FALL OF 1:80 APPLIES.
40. ALL INTERNAL COVERS TO HAVE MECHANICALLY JOINTED CORNERS AND DOUBLE SEALED WITH RECESSED TRAY TO ALLOW FOR FINISHES.
41. ALL MANHOLE COVERS IN BLOCK/SLAB AND EXTERNAL PAVING AREAS TO HAVE RECESSED COVERS OF THE APPROPRIATE GRADE TO ACCEPT ARCHITECT'S PAVING PROPOSAL.
42. UNLESS NOTED OTHERWISE IN THE MANHOLE SCHEDULE, ALL MANHOLE, GULLY AND CHANNEL COVERS (IRONWORK) SHOULD BE THE FOLLOWING SPECIFICATION:
 - B125 LOAD CLASS IN PEDESTRIAN AREAS
 - D400 LOAD CLASS IN VEHICULAR AREAS.
44. COVER LEVELS, GULLY POSITIONS, AND BUILDING LOCATION ARE APPROXIMATE AND SHALL BE CONFIRMED BY ARCHITECT/LANDSCAPE ARCHITECT. CONTRACTOR TO ALLOW FOR ADJUSTMENT TO SUIT AGREED POSITIONS AND FINISHED LEVELS, AND CONFIRM ALL COVER LEVELS ON SITE.
45. OUTFALL CONNECTION(S) SUBJECT TO AGREEMENT WITH THE APPROVING AUTHORITY.
46. THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING-
 - (I). ALL OPERATIONS SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE GENERAL HEALTH AND SAFETY POLICY OF THE DEVELOPER AS REQUIRED BY SECTIONS 2 OF THE HEALTH AND SAFETY AT WORK ACT 1974 AND IN PARTICULAR THE CONSTRUCTION (GENERAL PROVISIONS) REGULATIONS.
 - (II). THE LOCAL AUTHORITY AND UTILITIES COMPANIES ARE TO BE NOTIFIED PRIOR TO COMMENCEMENT OF WORK ON SITE.
 - (III). PRIOR TO CONSTRUCTION THE ACTUAL POSITIONS AND DEPTHS OF SERVICES LIKELY TO BE AFFECTED BY THE WORKS SHOULD BE ESTABLISHED BY MEANS OF HAND DIG IN CLOSE LIAISON WITH THE UTILITY COMPANIES. THE CONTRACTOR SHALL IMMEDIATELY ADVISE THE ENGINEER OF ANY SERVICES EXPOSED WHICH MAY AFFECT THE DESIGN.
 - (IIII). ALL OPERATIVES WORKING ON THE HIGHWAY WORKS MUST HAVE STREET WORKS ACCREDITATION.
47. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT PIPES ARE ADEQUATELY PROTECTED FROM CONCENTRATED LOADING BY CONSTRUCTION TRAFFIC DURING THE CONSTRUCTION PERIOD.
48. THE CONTRACTOR SHALL ALLOW FOR THE PROTECTION, TEMPORARY AND PERMANENT SUPPORT, AND TEMPORARY AND PERMANENT DIVERSION WORKS, AS NECESSARY TO ALL EXISTING SERVICES.
49. THE CONTRACTOR SHALL ALLOW FOR KEEPING TRENCHES AND EXCAVATIONS AS DRY AS PRACTICABLE BY PUMPING FROM TEMPORARY SUMPS AND DE-WATERING AS APPROPRIATE. THE POINT AND METHOD OF DISCHARGE TO BE AGREED WITH THE DRAINAGE AUTHORITY & LLFA AND ENVIRONMENT AGENCY.
50. IT IS ADVISED THAT DRAINAGE WORKS ARE TO BE CONSTRUCTED FROM THE OUTFALL TOWARDS THE HEAD OF RUN TO ENSURE THE OUTFALL CAN BE ACHIEVED.
51. ALL DRAINS TO BE CCTV SURVEYED ON COMPLETION OF THE WORKS.
52. GREASE TRAPS SHOULD BE PROVIDED ABOVE GROUND WITHIN AN ENZYME TREATMENT SYSTEM, BY APPROPRIATE SPECIALIST DESIGNER.
53. DESIGN ASSUMES DILUTION TRAPS TO BE PROVIDED WITHIN ABOVE GROUND DESIGNS FOR ALL CLASSROOM SINKS.

T02	STAGE 4 REVISED ISSUE	22.03.19	NH	LG
T01	PHASE 1 - STAGE 4 ISSUE	15.03.19	NH	LG

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Status: **STAGE 4**

Project: **SHREDDED WHEAT, METROPOLITAN**

Orig Title: **GENERAL NOTES
PHASE 1**

Size:	Date:	Drawn By:	Designed By:	Checked By:
A1	01/03/2019	N.HICKMAN	L.GLAZA	L.GLAZA
Scale:	NTS			
Project No:	Originator:	Zone:	Level:	Type: Discipline: Category / Number: Rev:

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