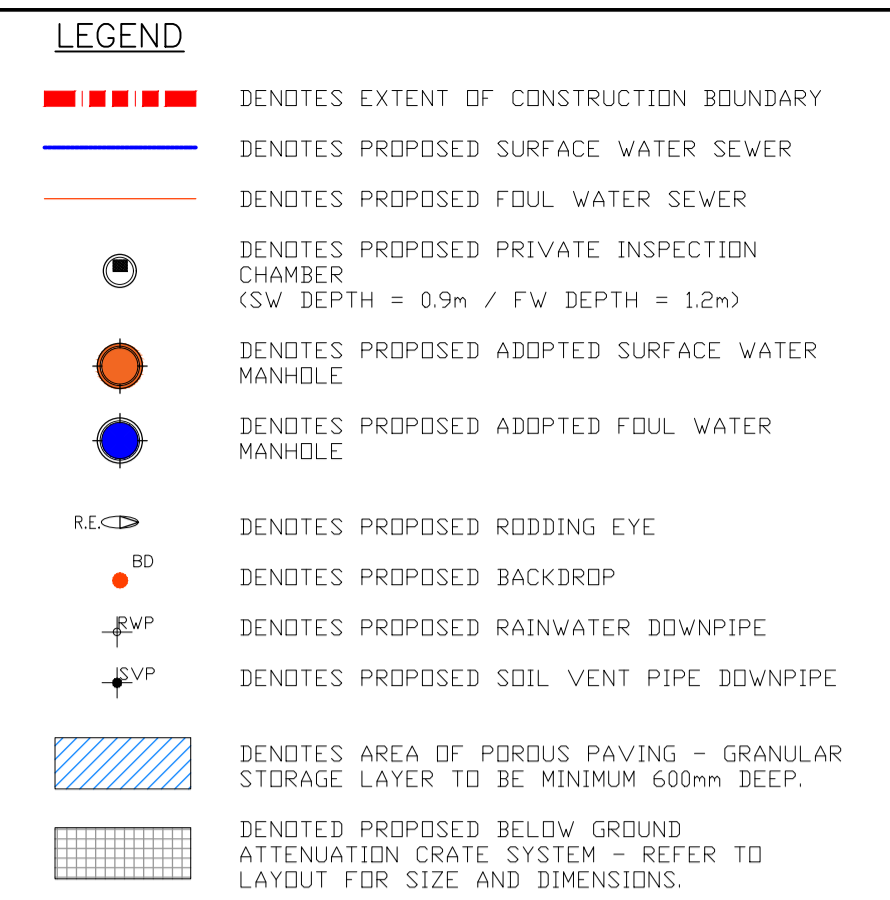


**GENERAL NOTES**

- THIS DRAWING IS THE COPYRIGHT OF THE CONSULTANTS AND MUST NOT BE REPRODUCED OR USED WITHOUT THEIR PERMISSION.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND SPECIALIST SUBCONTRACTORS DRAWINGS, AND THE SPECIFICATION.
- ANY DISCREPANCIES IN DIMENSIONS, OR DETAILS, OR BETWEEN THESE DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER IN WRITING FOR CLARIFICATION.
- ALL SWITCHED OFF, FROZEN, OR NOT SCHEDULED TO PRINT LAYERS WITHIN ELECTRONIC ISSUES OF THIS DRAWING SHOULD BE DISREGARDED.
- ALL DIMENSIONS ARE IN METRES, UNLESS NOTED OTHERWISE. ALL LEVELS ARE IN METRES.

**DRAINAGE NOTES**

- ALL DRAINAGE WHICH IS TO BE ADOPTED BY "SCOTTISH WATER" IS TO BE CONSTRUCTED IN ACCORDANCE WITH "SEWERS FOR SCOTLAND 3rd EDITION" AND ALL SUPPLEMENTARY SCOTTISH WATER DETAILS.
- ALL PRIVATE DRAINAGE TO BE IN ACCORDANCE WITH BS EN 12056, BS EN 752, AND RELEVANT SECTIONS OF "APPROVED DOCUMENT H" OF THE BUILDING REGULATIONS WHERE THERE ARE ANY CONCERNING REGARDING DRAINAGE NOT BEING ABLE TO MEET THESE REQUIREMENTS (E INVERTS AND LEVELS, THE ENGINEER SHOULD BE INFORMED IMMEDIATELY. DRAINAGE ALSO TO COMPLY WITH ANY "BUILDING STANDARDS" REQUIREMENTS).
- EXISTING DRAINAGE INFORMATION HAS BEEN COLLATED USING ALL AVAILABLE INFORMATION, AND IN SOME CASES CONDUCTED USING THIRD PARTY INFORMATION. WHILE EVERY CARE HAS BEEN TAKEN IN THE ACCURACY OF ALL ROUTING AND LEVELS, IT SHOULD BE TREATED AS INDICATIVE UNTIL CHECKED & CONFIRMED ON SITE.
- THE CONTRACTOR IS TO CHECK THE EXISTING DRAINAGE LEVELS, GEOMETRY CONNECTION & AVAILABILITY, AND CONFIRM THAT THE NETWORK IS RUNNING FREELY WITH NO DEFECTS PRIOR TO ANY DRAINAGE WORKS COMMENCING.
- ANY EXISTING SERVICES DISCOVERED DURING EXCAVATIONS TO BE REPORTED TO THE RELEVANT BODY IMMEDIATELY.
- THE CONTRACTOR IS TO ENSURE THAT PROTECTIVE MEASURES ARE TAKEN TO ENSURE THAT ALL DRAINAGE NETWORK, AND FITTINGS, ARE NOT DAMAGED BY THE SITE TRAFFIC PRIOR TO OVER SITE FILLING OPERATIONS BEING COMPLETED AROUND BUILDINGS.
- ALL PLAN CHAMBER SIZES DRAIN ARE INDICATIVE. FOR CORRECT SIZING AND SPECIFICATION OF CHAMBERS REFER TO THE ASSOCIATED DRAINAGE SCHEDULES/SECTIONS.
- ALL PLAN CHAMBER LEVELS SHOWN ARE FOR QUICK REFERENCE PURPOSES ONLY AND SHOULD NOT BE USED FOR CHAIRING OUT WORKS. CHAMBER INVERT LEVELS GIVEN ARE THE PIPE INVERT LEVELS, THEREFORE NOT NECESSARILY THE CHAMBER BASE LEVEL. THE ASSOCIATED DRAINAGE SCHEDULES/SECTIONS SHOULD BE USED TO DETERMINE ALL CHAMBER LEVELS.
- ALL CHAMBERS SHOULD BE LOCATED FULLY ON EITHER SOFT OR HARD LANDSCAPING. THE CONTRACTOR SHOULD STRING OUT HARD LANDSCAPING AND DRAINAGE PRIOR TO CONSTRUCTION IN ORDER TO ENSURE NO OVERLAPPING OF SURFACES AND/OR KERBS INTERSECTING OCCURS. WHERE UNAVOIDABLE OVERLAPPING OCCURS, CHAMBERS SHOULD, WHERE POSSIBLE, BE CONSTRUCTED IN SUCH A WAY THAT COVERS DO NOT OVERLAP OFFERING SURFACES OR INTERSECT KERBS. PARTICULAR ATTENTION SHOULD BE GIVEN WHERE RECESSED COVERS ARE PROPOSED.
- CHAMBER COVERS WITHIN AREAS OF BLOCK PAVING (BOTH STANDARD NON-PERMEABLE AND PERMEABLE) SHOULD BE LAD SQUARE TO THE LAYING PATTERN OF THE BLOCK PAVORS.
- CHAMBER PIPE CONNECTIONS ARE TO BE MADE SOFFIT TO SOFFIT WHERE DOWNSTREAM PIPE IS LARGER THAN THE UPSTREAM PIPE, UNLESS NOTED OTHERWISE.
- NO PRIVATE AREAS ARE TO DRAIN ONTO AREAS FOR ADOPTION.
- PIPE TYPES  
PIPE DIA. UP TO AND INCLUDING 300mm ARE TO BE UPVC PIPES TO BS 4602/2000 AND BS EN 1401-1. PIPE DIA. GREATER THAN 300mm ARE TO BE CONCRETE TO BS 5911 OR VITRIFIED UPVC TO BS EN 295, AND BS 65 (STORM WATER SEWERS ONLY).
- PIPE PROTECTION  
ALL ADAPTABLE PIPEWORK WITH LESS THAN 1200mm OF EFFECTIVE COVER IN BOTH VEHICULAR/HARD AREAS AND LANDSCAPED/SOFT AREAS, TO INCORPORATE CONCRETE PROTECTION TO THE PIPE (REFER TO RELEVANT DETAIL). FLEXIBLE JOINTS ARE TO BE PROVIDED AT ALL PIPE CONNECTIONS.
- ALL PRIVATE PIPEWORK WITH LESS THAN 900mm OF EFFECTIVE COVER TO VEHICULAR/HARD AREAS, AND LESS THAN 600mm COVER TO LANDSCAPED/SOFT AREAS, TO INCORPORATE CONCRETE PROTECTION TO THE PIPE (REFER TO RELEVANT DETAIL). FLEXIBLE JOINTS ARE TO BE PROVIDED AT ALL PIPE CONNECTIONS.
- WHERE PIPELINES CROSS WITHIN 300mm OF EACH OTHER, BOTH PIPES TO INCORPORATE CONCRETE PROTECTION (REFER TO RELEVANT DETAIL).
- DISCONNECTING CHAMBER TAILS  
DISCONNECTING CHAMBER TAILS ARE PROPOSED FOR ADOPTION THEREFORE SHOULD ADHERE TO ADAPTABLE PIPE CRITERIA (E MINIMUM DIA. OF 150mm, CONCRETE PROTECTION REQUIRED WHERE COVER DEPTH < 1.2m).
- DISCONNECTING CHAMBER TAILS TO BE LAD AT A MINIMUM INVERT OF 1:80 AND 1:10 PREFERRED MAXIMUM. WHERE TAILS FALL STEEPER THAN 1:10 THE ENGINEER SHOULD BE NOTIFIED AS SPECIFIC READING WILL BE REQUIRED.
- GULLY TAILS  
ALL GULLY TAILS TO BE 150mm DIA., SUITABLY ENCASED IN CONCRETE.
- ALL DRAINAGE DESIGN SHOWN IS ONLY RELEVANT TO AREAS FALLING UNDER HARLEY HADDOW REMIT. FOR ALL OTHER AREAS REFER TO THE RELEVANT PARTY.



REV	DESCRIPTION	CC	CC	CC	CC	06.03.20
A	Updated Site Layout					

**PLANNING**

The Multi-disciplinary Engineering Consultancy

Suite 4/3, The Skypark, 8 Elliot Place,  
Glasgow G3 8EP  
T 44 (0) 141 332 3031  
glas@harleyhaddow.com  
harleyhaddow.com  
Association for Consulting and Engineering Member Firm

Project: -  
Proposed Industrial Units  
Pant Industrial Estate  
Merthyr Tydfil, Wales

Drawing Title:  
Proposed Underground Drainage  
Layout

Scale @ A1 Date Engineer  
1:200 February 2020 C.Connor

Drawing No. Revision  
305056-032 A