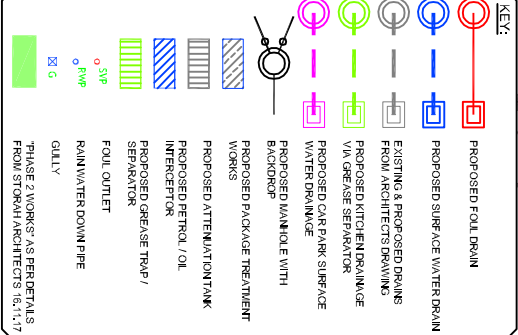


FINAL CONSTRUCTION ISSUE

TO THE BEST OF OUR KNOWLEDGE IT INCORPORATES ALL AUTHORISED MODIFICATIONS CARRIED OUT DURING THE CONSTRUCTION PERIOD. HOWEVER, ANY UNAUTHORISED ALTERATIONS MADE BY THIRD PARTIES NOT BE INCLUDED.

APPROVAL SHOULD BE OBTAINED BY A STRUCTURAL ENGINEER PRIOR TO ANY FUTURE ALTERATIONS / MODIFICATIONS TO THE STRUCTURE.



- | Revision | Amendment | Approved | Revision Date |
|----------|-------------------------------|----------|---------------|
| A | ISSUED FOR TENDER | VM | 23.05.17 |
| B | CORRECTIONS AND DETAILS ADDED | VM | 07.06.17 |
| C | ISSUED FOR COSTING | MMW | 08.11.17 |
| D | ISSUE FOR CONSTRUCTION | VM | 16.11.17 |
| E | FINAL CONSTRUCTION ISSUE | VM | 07.06.18 |
| | | | |

Project
PROPOSED ROBINWOOD ACTIVITY CENTRE
CROSS LANES, WREXHAM
LL13 0TF
Sheet
PROPOSED DRAINAGE LAYOUT - PLAN B
SHEET 2 OF 3

 ENVIRONMENTAL HAZARD

- The table above is provided to assist the Client & Principal Contractor to fulfill his obligations under the Construction (Design & Management) Regulations 2015; It does not include residual risks that a competent Contractor will be aware of nor does it absolve the Principal Contractor of his legal responsibilities.

INFORMATION BOX

SAFELY HEALTH AND ENVIRONMENTAL INFORMATION BOX

ALL DRAINAGE PIPES TO BE WRAPPED IN ROOT PROTECTION GEOTEXTILE OR PIPE BEDDING TO HAVE ROOT GUARD PROTECTION BARRIER

PROPOSED COVER LEVELS ARE BASED ON LEVELS FROM EXISTING TOPOGRAPHICAL SURVEY. THE EXTERNAL GROUND LEVELS, COVER LEVELS AND SURFACE WATER GULLY AND SLOT DRAINAGE CHANNEL POSITIONS THROUGHOUT THE SITE TO BE CONFIRMED BY THE LANDSCAPE ARCHITECT.

"AMPHIBIAN FRIENDLY KERBS TO BE PROVIDED WHERE NECESSARY AND BE OFFSET FROM PROPOSED GULLEY POSITIONS. GULLEYS TO BE PROVIDED WITH AN AMPHIBIAN ESCAPE SYSTEM, EG BUILT IN LADDER SYSTEM. THE LOCATIONS OF SUCH KERBS AND GULLEYS TO BE AGREED WITH THE SCHEME/LOCAL AUTHORITY ECOLOGIST"

- A rectangular box containing a disclaimer and a north arrow. The disclaimer text reads: "DRAWING BACKGROUND IS BASED UPON AHR TOPOGRAPHIC SURVEY © 22.07.17 A.L. RIGHTS RESERVED." Below the text is a stylized north arrow pointing towards the top right, with a large 'N' inside it.

DRAINAGE NOTES

- D1. ALL DIMENSIONS ARE IN MILLIMETERS.
UNLESS NOTED OTHERWISE, ALL LEVELS ARE IN METERS. UNLESS NOTED OTHERWISE, ALL WORKS TO BE CONDUCTED IN STRICT ACCORDANCE WITH SPECIFICATIONS OF THE LOCAL AUTHORITY. SBB301 1985 & SBBN/732-1.
- D2. ALL PIPE RUNS NEAR BUILDINGS TO COMPLY WITH THE BUILDING REGULATIONS 2002 PART 3, WHERE THE BUILDING IS NOT TO BE FILLED WITH CONCRETE, THE TRENCH HAS TO BE FILLED WITH CLASS G/EN CONCRETE UP TO THE LOWEST LEVEL OF THE FOUNDATION WHERE THE TRENCH IS FURTHER THAN 1m FROM THE FOUNDATION. THE TRENCH SHALL BE FILLED WITH CLASS G/EN CONCRETE TO A LEVEL BELOW THE LOWEST LEVEL FOR THE FOUNDATION EQUAL TO THE DISTANCE FROM THE FOUNDATION LESS 150mm. IN BOTH CASES THE PIPE SHALL BE BEDDED AND SURROUNDED IN 150mm THICK CLASS G/EN CONCRETE.
- D3. WHERE PIPES EXTERNA TO THE STRUCTURES ARE DEPTHTO SCOTTING (FOR AROUND LEVEL OF LESS THAN 600mm THEY SHALL HAVE A CLASS G/EN CONCRETE ENCASEMENT (150mm) THICK.
- D4. WHERE A PIPE, UNDER A CARRIAGEWAY, HAS A DEPTH OF COVER OF LESS THAN 12m, THE PIPE SHALL BE LAID IN A CLASS Z BEDDING.
- D5. WHERE PIPES ARE BEDDED AND SURROUNDED IN CONCRETE, FLEXIBLE JOINTS SHOULD BE PROVIDED. COMPRESSIBLE BOLARS (FIBREBOARD OR POLYSTYRENE) SHALL BE PROVIDED AT A MINIMUM OF 100mm TO THE JOINTS WITH PPE JOINTS. THE BOLARS SHALL BE PRE-CUT TO PIPE DIAMETER AND TO A HEIGHT AND WIDTH EQUAL TO THE CONCRETE CROSS SECTION. A BOARD THICKNESS OF 18mm FOR PIPES UP TO 450mm NOMINAL DIAMETER AND 25mm FOR PIPES OVER 450mm NOMINAL DIAMETER.
- D6. ALL PRIVATE BUILDING DRAINAGE SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH SBBN/732-1.
- D7. UNLESS OTHERWISE SPECIFIED BUILDING DRAINAGE TO BE 100mm INTERNAL DIAMETER.
- D8. MINIMUM GRADIENT FOR Ø100mm SURFACE DRAINAGE PIPES IS 1:50, AND Ø150mm IS 1:100.
- D9. MINIMUM GRADIENTS FOR FOLL DRAINAGE PIPES:
Ø100mm: 1:40 WHERE FLOWS LESS THAN 1L/S, OR WHERE NO WGS ARE CONNECTED.
Ø100mm: 1:70 WHERE FLOWS 1L/S OR GREATER, OR WHERE AT LEAST TWO WGS ARE CONNECTED.
Ø150mm: 1:35 WHERE FLOW IS LESS THAN 3L/S, OR WHERE UP TO TWO WGS ARE CONNECTED.
Ø150mm: 1:60 WHERE FLOW IS 3L/S OR GREATER, OR WHERE TWO OR MORE WGS ARE CONNECTED
- D10. ALL GULLIES NOT CONNECTED TO INSPECTION CHAMBERS ARE TO BE RODDABLE.
- D11. ALL GULLY CONNECTIONS OTHER THAN THOSE AT MANHOLES TO BE MADE VIA Y JUNCTIONS.
- D12. GULLIES CONCORDANT WITH PROPOSED ROAD CROSSINGS TO HAVE PEDESTRIAN TYPE GULLY COVERS.
- D13. ALL ROAD GULLY CONNECTIONS TO BE 150mm DIAMETER AND ANY GULLY CONNECTIONS SUBJECT TO TRAFFIC LOADING TO HAVE CLASS Z BEDDING & SURROUND
- D14. ALL STUB STACKS TO BE FITTED WITH AIR ADMITTANCE VALVES WHERE BROADMIDIAN EXCESSES 12m EXCEPT AT THE HEAD OF THE RUN. SOL VENT PIPES LOCATED AT THE HEAD OF A RUN TO BE INSTALLED WITH ROOF TILE VENT.
- FINAL CONSTRUCTION ISSUE**