

- DESIGN NOTES:**
- This drawing is to be read in conjunction with all other RWV Consulting Ltd. project drawings and specifications.
 - All levels are in metres above Ordnance datum based on the topographical survey drawing supplied by the Client.
 - All existing drainage levels and outfall points shall be surveyed and verified by the contractor prior to the commencement of the works. Any discrepancies shall be reported to the Engineer immediately.
 - Pipework under adoptable highway with less than 1.2m cover, and other trafficked areas with less than 0.9m cover to receive concrete encasement. Compressible fillerboard (18mm thick) to be placed at pipe joints at least the width of the concrete surround.
 - Rainwater pipes to discharge via vertical inlet hoppers.
 - Large radius bends to be used at the foot of vertical discharge pipes/svps.
 - Rodding eyes (RE) are to be used at the head of runs, where appropriate.
 - Manhole covers should not bridge different surfaces.
 - Where two pipelines (other than plastic pipes) cross with less than 300mm separation pipes are to be surrounded with Class Z concrete surround for not less than 1m centred on the crossing point. Concrete surround to be extended as necessary to within 150mm of nearest flexible joints.
 - All internal foul outlets and rainwater pipe positions are to be confirmed by the Architect.
 - All gully gratings are to be heavy duty.
 - All gully pipework to be 150mm minimum diameter.
 - All below slab foul drainage to be sized as shown or minimum 100mm diameter laid to a minimum gradient of 1 in 80.
 - All pipework to have flexible joints and fully in compliance with the Building Regulations 2010.
 - All pipework beneath slabs to be provided with min. 150mm Class Z concrete bed and surround.
 - All pipework to be laid with soffit to soffit connections unless noted otherwise.
 - All redundant site drainage to be removed / grubbed-up to the approval of the Building Control officer.

DRAINAGE DESIGN & POINT OF PROPOSED CONNECTION ARE SUBJECT TO AGREEMENT WITH LOCAL PLANNING AUTHORITY & SEWERAGE UNDERTAKER

SURFACE WATER DRAINAGE SYSTEM HAS BEEN DESIGNED TO 1:100YR + 30% CLIMATE CHANGE DESIGN STANDARD

"A SECTION 106 APPLICATION TO CONNECT MUST BE MADE TO DCWW FOR ANY CONNECTION OR COMMUNICATION WITH THE PUBLIC SEWER NETWORK. THE DEVELOPER SHALL GIVE 21 DAYS' NOTICE PRIOR TO CONNECTION, AND THE WORKS MAY ONLY BE UNDERTAKEN BY A SSIP ACCREDITED CONTRACTOR."

DRAINAGE LEGEND

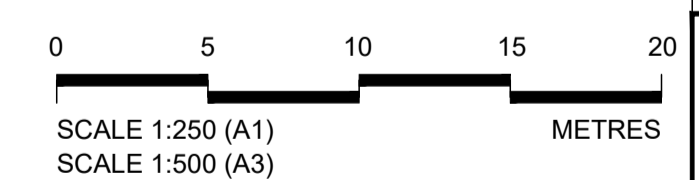
| | | | |
|--|-----------------------------------|--|---|
| | Existing Foul sewer | | ACO Kerb drain |
| | Existing Storm sewer | | ACO Kerb drain outlet |
| | Proposed storm drain | | Perforated carrier drain with geotextile surround |
| | Proposed foul drains | | Threshold Drain |
| | Proposed storm manhole | | Channel drain with direct outlet |
| | Proposed storm inspection chamber | | Lined cut-off drain with perforated pipe in base |
| | Proposed foul manhole | | Carrier ditch with infiltration trench in base |
| | Proposed foul inspection chamber | | Dry SWALE /Infiltration Trench with checkdam |
| | Proposed foul mini access chamber | | Rodding Point |
| | Proposed Catchpit /Sump Chamber | | Proposed Cellular Soakaway |

| Chambers For Non-adoptable Areas | | |
|----------------------------------|---------------------|--------------|
| Type | Depth To Invert (m) | Covers Sizes |
| Shallow | 0.6 or less | 150 |
| Deep | 1.2 or less | 450 |

| Type | Depth To Invert (m) | Min. Internal Size (mm) | Covers Sizes |
|---------------------|---------------------|-------------------------|----------------------|
| | | Length x Width (mm) | Circular (mm) |
| SuDS Planter Large | 2x0.6m | 430x430 | 430 |
| SuDS Planter Medium | 1.6x0.6m | 430x430 | 430 |
| SuDS Planter Small | 1.2x0.6m | Restricted access to | Restricted access to |

- SuDS /SAB DRAINAGE NOTES:**
- Surface water system has been designed in accordance with the principles set out within the Statutory Standards for Sustainable Drainage Systems 2018.
 - S1 - Run-off Destination** - The drainage destination hierarchy has been followed as noted below:
 Priority Level 1 - Re-use - No foreseeable demand
 Priority Level 2 - Infiltration - Initial site investigations show varied infiltration within the weathered fractured limestone (Porthkerry Member). Infiltration features are designed based on the closest recorded infiltration rate.
 Priority Level 3 - N/A Priority Level 4 - N/A Priority Level 5 - N/A
 - S2 - Hydraulic Control** - Hydraulic control is not applicable as discharging directly to ground. Interception is provided within infiltration features as close to source as possible. Exceedance routes are provided with areas of aboveground storage for exceedance events provided within the site to ensure no offsite flooding.
 - S3 - Water Quality** - All surface water runoff passes through suitably sized SuDS features to provide adequate levels of treatment and pollution interception prior to discharge ground. Additional above ground features are provided to enable maintenance, cleansing and pollution control.
 - S3 - Amenity** - The drainage design has been developed to maximise the benefits for amenity for the overall site.
 - S4 - Biodiversity** - The proposed external works and drainage scheme are designed to enhance planting and soft landscaping opportunities for the site. With drainage features along the eastern and western boundaries linking back to the proposed enhanced habitat areas.

- All SuDS drainage is subject to Local Authority SAB Approval, no works to be carried prior to approval.
 - System has been designed to ensure no surface water flooding up to the 30yr Storm event with localised above ground storage provided within drainage features away from the main school buildings during extreme events. Full design has been carried out for all storms up to and including 100yr + 30% Climate Change critical storm event.
 - Surface Water drainage & SuDS maintenance - Surface water drainage system to be inspected and maintained in accordance with current best practices and in line with CIRIA Report C753 - The SuDS Manual.



| Rev. | Date. | Details. | By. | Chk. |
|------------|-------|----------|-----|------|
| | | | | |
| Amendments | | | | |

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Project: **LLANCARFAN SCHOOL RHOOSE**

Title: **PROPOSED DRAINAGE LAYOUT**

| | | |
|--------------------------|-------------------|--------------------------|
| Drawn: DRW | Checked: ABP | Scale(s) at A1: AS SHOWN |
| Date: 28.04.20 | RWV Job N°: C6906 | Revision: P1 |
| Drawing Status: PLANNING | Suitability: S0 | |

Drawing N°: **LPS-RVV-ZZ-00-DR-C-2000**