

Project No. 150457

Client: Council of the Isles of Scilly

Tender Issue 10/11/2017

STRIDE TREGLOWN
ARCHITECTURE

Carn Gwavel School

10 November 2017

This document includes:

Code	Section	Revision	Dated
R10	Rainwater drainage systems		

R10 Rainwater drainage systems

To be read with Preliminaries/ General conditions.

GENERAL

110 GRAVITY RAINWATER DRAINAGE SYSTEM

- Rainwater outlets: Proprietary as clause 365.
- Gutters: Box gutter to main roof, preformed UPVC gutter to buggy store.
- Pipework: Galvanized steel, pressed.
- Below ground drainage: to engineers design.
- Disposal: to engineers design.
- Controls: to engineers design.
- Accessories: to manufacturers recommendations.

SYSTEM PERFORMANCE

210 DESIGN

- Design: Complete the design of the rainwater drainage system.
- Standard:
 - To BS EN 12056-3, clauses 3–7, Annex A and National Annexes.
 - To BS EN 12056-5, clauses 3, 4, 6 and 11.
- Proposals: Submit drawings, technical information, calculations and manufacturers' literature.

221 COLLECTION AND DISTRIBUTION OF RAINWATER

- General: Complete, and without leakage or noise nuisance.

PRODUCTS

336 GALVANIZED STEEL RAINWATER SYSTEM EXTENSION & EXTERNAL CANOPY.

- Manufacturer: Lindab Ltd www.lindab.co.uk Tel: +44 (0)1604 788350.
 - Product reference: Rainline System.
- Profile: Half round.
- Gauge: tbc.
- Size: Extension:100mm, External Play Canopy: 125mm .
- Treatment: Hot dip galvanized to BS EN ISO 1461 after manufacture.
- Finish: Aluzinc, uncoated.
- Brackets: To manufacturers recommendations.
 - Fixings: To manufacturers recommendations.
 - Size: To manufacturers recommendations.
- Accessories: Complete system containing; Stop ends, box hoppers, outlets, gutter clips, sealant, fixings brackets, down pipes, shoes and leaf guards.
- Other Requirements: Due to projecting brick plinth a swan neck / crank will be required at each below ground connection point.

350A PVC-U GUTTERS To Buggy Store

- Standard: To the relevant parts of BS EN 607 and BS EN 1462, Kitemark certified.
- Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
- Recycled content: Contractor's choice.
- Profile: Half round.
- Nominal size: 100 mm.
- Colour: White.
- Brackets: Contractors choice.
 - Fixings: Contractors choice.
 - Size: Contractors choice.
- Accessories: Gutter stop ends and Leaf guards.

360 SEALANT FOR GUTTERS

- Type: as recommended by manufacturer.

EXECUTION

600 PREPARATION

- Work to be completed before commencing work specified in this section:
 - Below ground drainage. Alternatively, make temporary arrangements for dispersal of rainwater without damage or disfigurement of the building fabric and surroundings.
 - Painting of surfaces which will be concealed or inaccessible.

605 INSTALLATION GENERALLY

- Electrolytic corrosion: Avoid contact between dissimilar metals where corrosion may occur.
- Plastics and galvanized steel pipes: Do not bend.
- Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.
- Protection:
 - Fit purpose made temporary caps to prevent ingress of debris.
 - Fit access covers, cleaning eyes and blanking plates as the work proceeds.

610 FIXING AND JOINTING GUTTERS

- Joints: Watertight.
- Brackets: Securely fixed.
 - Fixings: to manufacturers recommendations.
 - Fixing centres: to manufacturers recommendations.
 - Additional brackets: Where necessary to maintain support and stability, provide at joints in gutters and near angles and outlets.
- Roofing underlay: Dressed into gutter.

615 SETTING OUT EAVES GUTTERS - TO FALLS

- Setting out: To true line and even gradient to prevent ponding or backfall. Position high points of gutters as close as practical to the roof and low points not more than 50 mm below the roof.
- Outlets: Align with connections to below ground drainage.

630 INSTALLING RAINWATER OUTLETS

- Fixing: Secure. Fix before connecting pipework.
 - Method: to manufacturers recommendations.
- Junctions between outlets and pipework: Accommodate movement in structure and pipework.

635 FIXING PIPEWORK

- Pipework: Fix securely, plumb and/ or true to line.
- Branches and low gradient sections: Fix with uniform and adequate falls to drain efficiently.
- Externally socketed pipes and fittings: Fix with sockets facing upstream.
- Additional supports: Provide as necessary to support junctions and changes in direction.
- Vertical pipes:
 - Provide a loadbearing support at least at every storey level.
 - Tighten fixings as work proceeds so that every storey is self supporting.
 - Wedge joints in unsealed metal pipes to prevent rattling.
- Wall and floor penetrations: Isolate pipework from structure.
 - Pipe sleeves: As section P31.
 - Masking plates: Fix at penetrations if visible in the finished work.
- Expansion joint pipe sockets: Fix rigidly to buildings. Elsewhere, provide brackets and fixings that allow pipes to slide.

650 JOINTING PIPEWORK AND GUTTERS

- General: Joint with materials and fittings that will make effective and durable connections.
- Jointing differing pipework and gutter systems: Use adaptors intended for the purpose.
- Cut ends of pipes and gutters: Clean and square. Remove burrs and swarf. Chamfer pipe ends before inserting into ring seal sockets.
- Jointing or mating surfaces: Clean and, where necessary, lubricate immediately before assembly.
- Junctions: Form with fittings intended for the purpose.
- Jointing material: Strike off flush. Do not allow it to project into bore of pipes and fittings.
- Surplus flux, solvent jointing materials and cement: Remove.

675 CUTTING COATED PIPEWORK AND GUTTERS

- Cutting: Recoat bare metal.

700 ACCESS FOR TESTING AND MAINTENANCE

- General: Install pipework and gutters with adequate clearance to permit testing, cleaning and maintenance, including painting where necessary.
- Access fittings and rodding eyes: Position so that they are not obstructed.

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Signed Off **Tender Issue 10/11/2017**

COMPLETION

900 TESTING GENERALLY

- Dates for testing: Give notice.
 - Period of notice (minimum): a week.
- Preparation:
 - Pipework: Complete, securely fixed, free from defects, obstruction and debris before testing.
- Testing:
 - Supply clean water, assistance and apparatus.
 - Do not use smoke to trace leaks.
- Records: Submit a record of tests.

910 GUTTER TEST

- Preparation: Temporarily block all outlets.
- Testing: Fill gutters to overflow level and after 5 minutes closely inspect for leakage.

915 MAINTENANCE INSTRUCTIONS

- General: At completion, submit printed instructions recommending procedures for maintenance of the rainwater installation, including full details of recommended inspection, cleaning and repair procedures.

920 IMMEDIATELY BEFORE HANDOVER

- Construction rubbish, debris, swarf, temporary caps and fine dust which may enter the rainwater system: Remove. Do not sweep or flush into the rainwater system.
- Access covers, rodding eyes, outlet gratings and the like: Secure complete with fixings.