



## **Addington New Cross Central**

### **Validation and Sustainable Drainage Management**

|                |                                                    |
|----------------|----------------------------------------------------|
| Client         | Far East Consortium                                |
| Project Title  | New Cross Central                                  |
| Project Number | AS01                                               |
| Revision       | P02 – Updated to include SW08 Flow Control Manhole |
| Date Issue     | 1 <sup>st</sup> March 2023                         |

**Addington New Cross Central  
Validation & Sustainable Management Drainage**

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**Appendices**

A – Design Drawings

B – Section 106 United Utilities Installation Approval

C - SDS Geolight Attenuation Installation Certificate

D – CCTV Survey

## 1.0 Project Drainage Introduction

The below ground foul and surface water drainage systems at the Addington New Cross Central have designed by Civic Engineers. The drainage systems leave the site via a combined connection into the existing sewer located on Marshall Street, the surface water system incorporates a sustainable drainage scheme to collect surface water from the development's external pavement drainage, internal courtyard (Level 2), Townhouse thresholds (Ground Floor) and Terrace/Roofs (Levels 6,7,8,9).

The surface water system incorporates an attenuation storage system, flow control chamber and catchpit manholes within the system prior to the surface water being discharged into the combined manhole before finally discharged from site into the local sewer network on Marshall Street. The SDS Geolight Attenuation System will ensure that the flow rate is restricted to 6.0 Litres/Second.

The drainage systems have been constructed as per the design drawings and specification.

The drainage scheme design drawings are listed below and can be referenced in Appendix A.

The connection into the existing sewer has been inspected and approved by United Utilities. S106 Part 2 approval can be referenced in Appendix B.

The SDS Geolight Attenuation Installation Certificate can be reference in Appendix C

## 2.0 Design Drawings – (please refer to Appendix A)

| Drawing Number                   | Drawing Title                           |
|----------------------------------|-----------------------------------------|
| AS01-CIV-00-XX-DR-D-0001 Rev C03 | Drainage Strategy – General Arrangement |
| AS01-CIV-00-XX-DR-D-0002 Rev C05 | Drainage Strategy – Manhole Schedule    |
| AS01-CIV-00-XX-DR-D-0101 Rev C01 | Drainage Details Sheet 1 of 5           |
| AS01-CIV-00-XX-DR-D-0102 Rev C01 | Drainage Details Sheet 2 of 5           |
| AS01-CIV-00-XX-DR-D-0103 Rev C01 | Drainage Details Sheet 3 of 5           |
| AS01-CIV-00-XX-DR-D-0104 Rev C01 | Drainage Details Sheet 4 of 5           |
| AS01-CIV-00-XX-DR-D-0105 Rev C01 | Drainage Details Sheet 5 of 5           |
| Attenuation Tank Design          | Attenuation Tank Detail 1               |

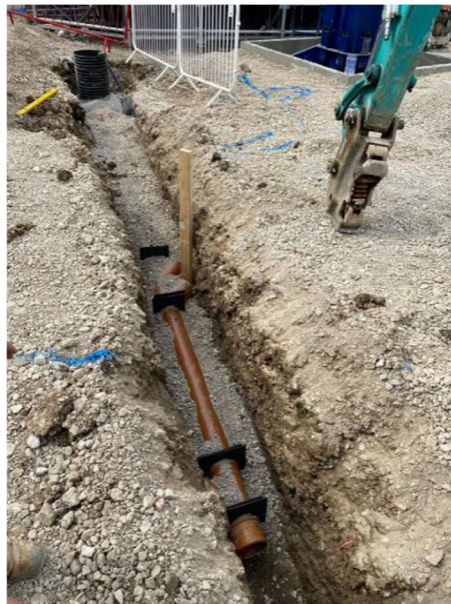
### 3.0 Site Installation Photographs

The completed site installation has been validated by a CCTV survey, please see Appendix D

#### Attenuation Tank – Excavation & Cell Installation

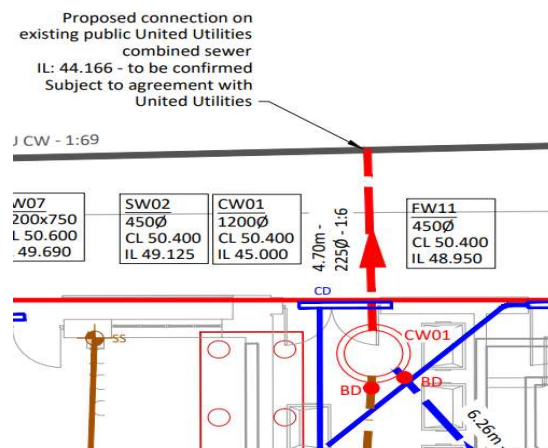


#### Catch Pit Manhole & Connection

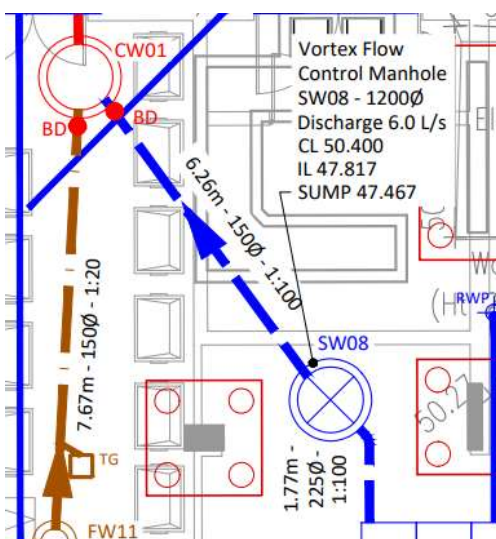


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**Combined Manhole and Access (Header) CW01**



**Flow Control Manhole (SW08)**



#### **4.0 Management & Maintenance Plan**

The sustainable drainage scheme will require general maintenance throughout the lifetime of the project and the system has been designed to incorporate feature to allow the system to be easily maintained.

The areas of the drainage scheme that require regular inspection and maintenance are:

- Roof, Terrace and RWP Outlets - ensure that all leaves or loose material is removed to prevent debris entering into the systems.
- External Drains located in the Courtyard and Townhouse threshold drainage - ensure that the debris collected in the gulley does not impede the outlet flow into the main pipework and should be cleared on a regular basis.
- CW01 combined manhole & Catchpit Manhole to ensure that all debris is removed to ensure there are no blockages and that water/foul is following designed. The Building Management Team (Zenith) will implement a planned and preventative management regime for the sustainable drainage scheme in line with the manufacturer's recommendations. These recommendations are given in CIRIA C697.
- SW08 Flow Control manhole - The Building Management Team (Zenith) will implement a planned and preventative management regime for the sustainable drainage scheme in line with the manufacturer's recommendations. These recommendations are given in CIRIA C697.

Prior to completion FEC will ensure that the Building Management Team are briefed and fully trained to ensure that the Inspection & Maintenance Plan is undertaken.

#### **4.1 Maintenance Recommendation - Attenuation & Inspection Manholes**

Planned Maintenance Procedure - There are no specific steps for planned maintenance; however, we have recommended that the stormwater tank inspection chambers, including the stormwater drainage distribution pipes, are checked periodically in conjunction with general maintenance of the underground pipe network.

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We also recommended that the system has a CCTV annually to establish any areas that may have been damaged or debris that maybe collecting within the below ground drainage network.

| <b>TABLE 21.3 Operation and maintenance requirements for attenuation storage tanks</b> |                             |                                                                                                                                                                                                        |                                     |
|----------------------------------------------------------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
|                                                                                        | <b>Maintenance schedule</b> | <b>Required action</b>                                                                                                                                                                                 | <b>Typical frequency</b>            |
|                                                                                        | Regular maintenance         | Inspect and identify any areas that are not operating correctly. If required, take remedial action                                                                                                     | Monthly for 3 months, then annually |
|                                                                                        |                             | Remove debris from the catchment surface (where it may cause risks to performance)                                                                                                                     | Monthly                             |
|                                                                                        |                             | For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary. | Annually                            |
|                                                                                        |                             | Remove sediment from pre-treatment structures and/or internal forebays                                                                                                                                 | Annually, or as required            |
|                                                                                        | Remedial actions            | Repair/rehabilitate inlets, outlet, overflows and vents                                                                                                                                                | As required                         |
|                                                                                        | Monitoring                  | Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed                                                                             | Annually                            |
|                                                                                        |                             | Survey inside of tank for sediment build-up and remove if necessary                                                                                                                                    | Every 5 years or as required        |

## **Appendices**

A – Design Drawings

B – United Utilities Section 106 Drainage Connection to Sewer Approval

C - SDS Geolight Attenuation Installation Certificate

D – CCTV Survey

