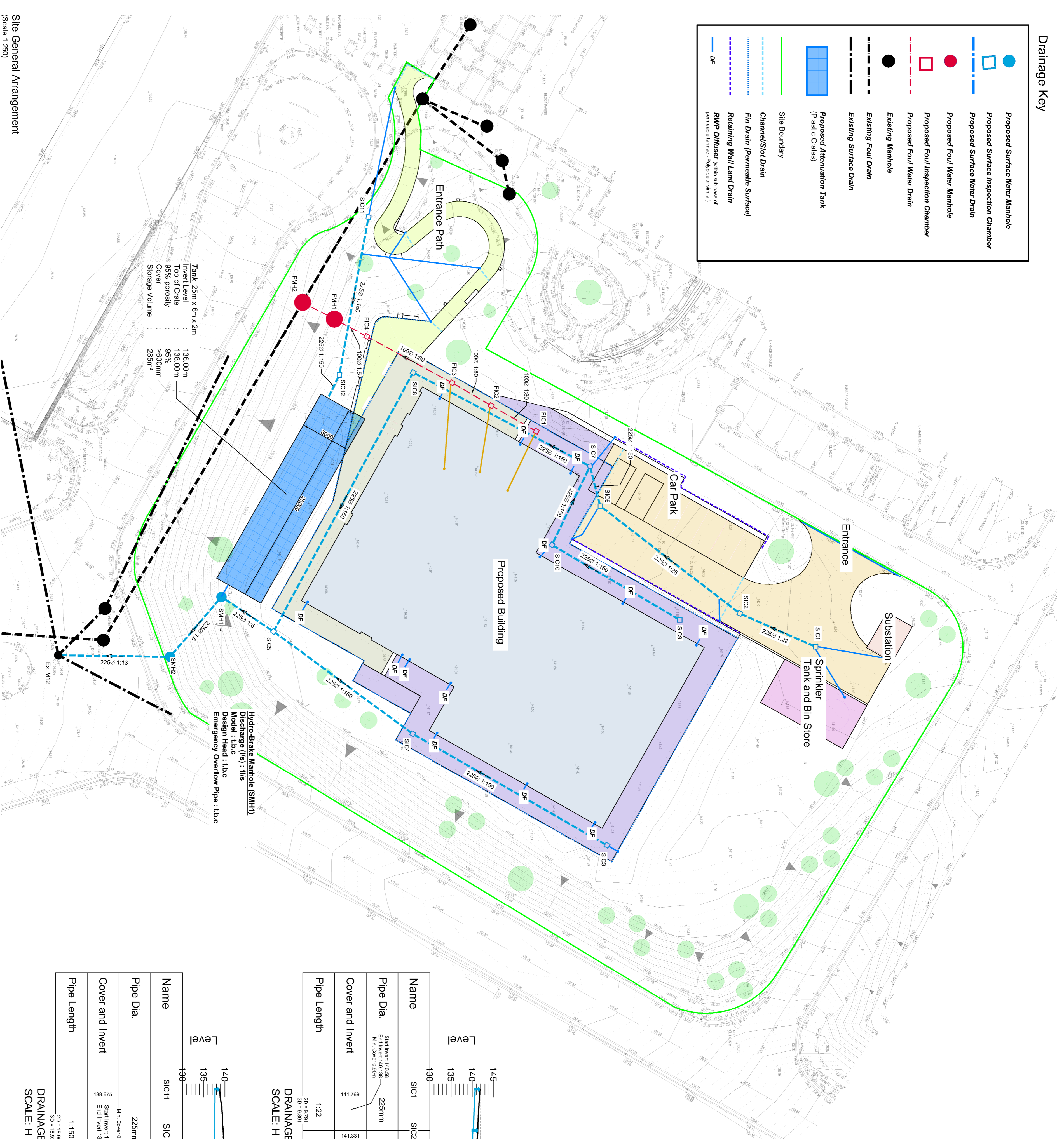
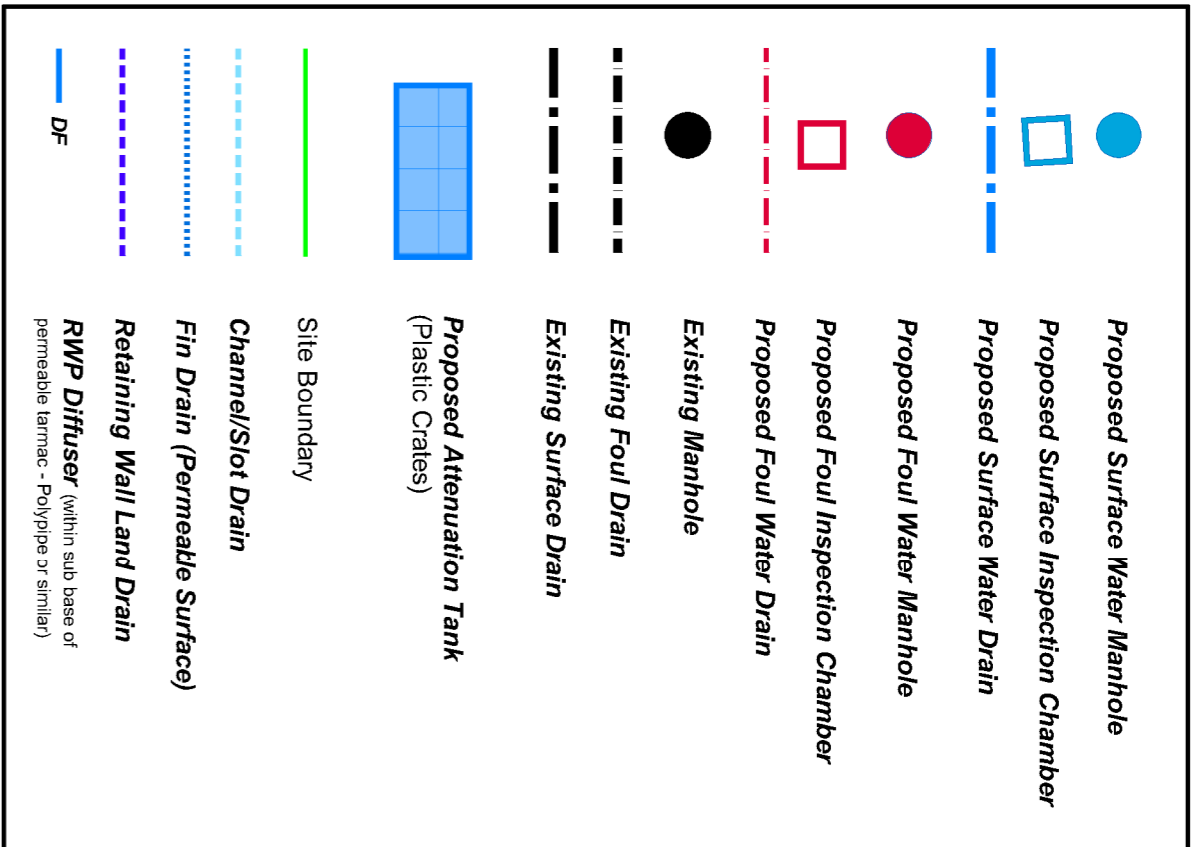


**Drainage Key**



**Site Area**  
0.5411ha

**Greenfield Runoff Rate**  
2.216 (0.07619)

**Runoff Coefficients**  
Hardstanding Areas - 1.00  
Landscape Drained Areas - 0.15

**Hardstanding Areas**  
Building, Car Park, Access Road, Pavements - 2435m²  
Existing Landscape Areas falling towards building - 800m²

**Hardstanding Discharge Rate**  
To be agreed with LFA - 1.00%

**Landscape Discharge Rate**  
To be agreed with LFA - 0.25%

**Storage Volume Required**  
22/287m³

**Stage 3 Drainage Strategy**

Surface water runoff from the proposed development will be managed in accordance with the SUDS Hierarchy; however, infiltration has been discounted following site assessment and therefore an attenuation-based strategy has been adopted. Surface water runoff will be attenuated on site and discharged at a controlled rate to the existing 600mm diameter surface water drain crossing the site. The existing 600mm diameter drain runs generally north-south to south-west across the site and will form the surface water outfall, subject to confirmation of ownership, condition, invert levels and capacity.

Drainage from the site will be restricted to the agreed greenfield runoff rate via a flow control device located within a hydro-brake manhole.

The proposed flow control chamber (SMH1) will restrict discharge to approximately 1.0ls as part of a staged or sub-detention control strategy, with final rates to be agreed with the LFA/SAB.

Surface water attenuation will be provided via a zinc tank (approx. 25m x 8m x 2m deep) with a storage volume of approximately 285m³, located along the southern boundary of the site.

Permeable paving will be provided to pits and parking bays to provide source control, reduce runoff rates and contribute to attenuation storage.

Rainwater pits will discharge to permeable paving via diffuser units within the site where appropriate to provide even distribution and storage.

Surface water within permeable paving will be conveyed via lin drains to the perimeter surface water drainage system.

The drainage network will comprise conventional gravity pipework connecting to attenuation features and the final outfall.

Finished ground levels and drainage design will ensure no increase in flood risk on or off site, with excessive flows directed away from buildings and roaded safely overland.

Foul drainage from the development will discharge via gravity to the existing 225mm diameter full-combined public sewer at the nearest suitable manhole.

The receiving manhole is greater than 4m deep and due to the level difference, the foul drainage network will incorporate a series of stepped step-down manholes to achieve a compliant connection.

The foul drainage proposals are subject to confirmation of invert levels, connection feasibility and downstream capacity within the public sewer network.

Approval for the foul connection will be obtained from Welsh Water under a Section 163 sewer connection agreement.

All foul and surface water drainage will be designed in accordance with Welsh Water standards. Sewers for adoption (or current equipment) and SUDS requirements. The drainage strategy remains subject to detailed Stage 3 design development, statutory approvals and confirmation of existing infrastructure.

