

Surface Water Drainage Strategy Statement

Introduction and Scope

This Surface Water Drainage Strategy Statement supports the planning application for the redevelopment of The Pines SEND School. The works comprise refurbishment and minor extension of the retained building, together with revised accessible routes, play areas, hardstanding and landscaping.

The strategy has been developed with reference to the NPPF, WSCC LLFA requirements, Approved Document H, CIRIA C753 The SuDS Manual and the National Standards for Sustainable Drainage Systems. It retains the existing separate private surface-water and foul-water networks, with localised surface-water drainage provided to serve the proposed roof and hardstanding alterations.

The RIBA Stage 3 drainage proposals are shown on Drawings **PINES-ATR-01-XX-D-C-951001** and **PINES-ATR-01-XX-D-C-951002**.

Existing Ground Conditions and Discharge Hierarchy

The Phase 2 Ground Investigation identified Made Ground over River Terrace Deposits, with groundwater encountered at approximately 3.20m below ground level. Infiltration testing was not undertaken; therefore, infiltration-based drainage has not been relied upon.

The discharge hierarchy has been considered as follows:

- Infiltration: Not relied upon because site-specific infiltration performance has not been demonstrated.
- Watercourse: No suitable connection is available within or immediately adjacent to the proposed works.
- Surface-water sewer: The site is served by an established private surface-water network receiving runoff from the existing roofs and hardstanding. Discharge to this network has therefore been retained.

The condition, levels, connectivity and capacity of the receiving private network remain subject to verification during RIBA Stage 4.

Runoff Rates and Flow Management

The impermeable-area assessment identifies:

- Pre-development hardstanding: approximately 2,677.13m²;
- Post-development hardstanding: approximately 2,891.39m²;
- Net increase: approximately 214.26m²; and
- Increase relative to the existing hardstanding: approximately 8.0%.

No dedicated attenuation structure or separate flow-control chamber is proposed at RIBA Stage 3. During RIBA Stage 4, the D&B Contractor shall undertake an assessment to confirm:



- final contributing catchments and runoff coefficients;
- pre- and post-development runoff rates and volumes;
- the applicable climate-change allowance;
- the capacity of the receiving private network;
- discharge-rate requirements;
- exceedance and overland-flow routes; and
- any attenuation or flow-control measures required by the LLFA.

The proposed levels direct runoff away from the retained building towards channel drains, gullies, the retained network or adjacent soft-landscaped areas. The proposed drainage generally comprises 150mm-diameter pipework laid at gradients of approximately 1:37 to 1:110.

Channel-drain outlet levels are indicative. A 300mm outlet-pipe invert drop below the channel invert has been assumed at the south-eastern connection, subject to confirmation against the selected proprietary product during RIBA Stage 4.

Two inspection chambers are proposed over retained surface-water sewers. Other connections incorporate backdrop arrangements where required. Existing sewer routes, diameters, invert levels, connectivity, chamber construction and condition shall be verified before installation.

The proposed drainage layouts are presented on **PINES-ATR-01-XX-D-C-951001** and **PINES-ATR-01-XX-D-C-951002**.

SuDS and Water Quality Management

The selection of SuDS measures has been influenced by:

- variable Made Ground over River Terrace Deposits;
- absence of site-specific infiltration testing;
- retained buildings and drainage infrastructure;
- shallow drainage and constrained outfall levels;
- limited available space; and
- the operational, accessibility and safeguarding requirements of the SEND school.

Infiltration measures have not been relied upon, while ponds, basins and swales are constrained by the retained development and external-space requirements.

- The RIBA Stage 3 surface-water management train comprises:
- positive grading away from the retained building;



- collection through rainwater downpipes, channel drains and gullies;
- primary sediment interception through trapped gullies, proprietary channel outlets and silt-trap chambers;
- conveyance through new private surface-water pipework; and
- discharge to the retained private surface-water network.



AtkinsRéalis



Moustafa Abdelwahab
AtkinsRéalis UK Limited
2 Atlantic Square
York Street
Glasgow
G2 8NJ

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