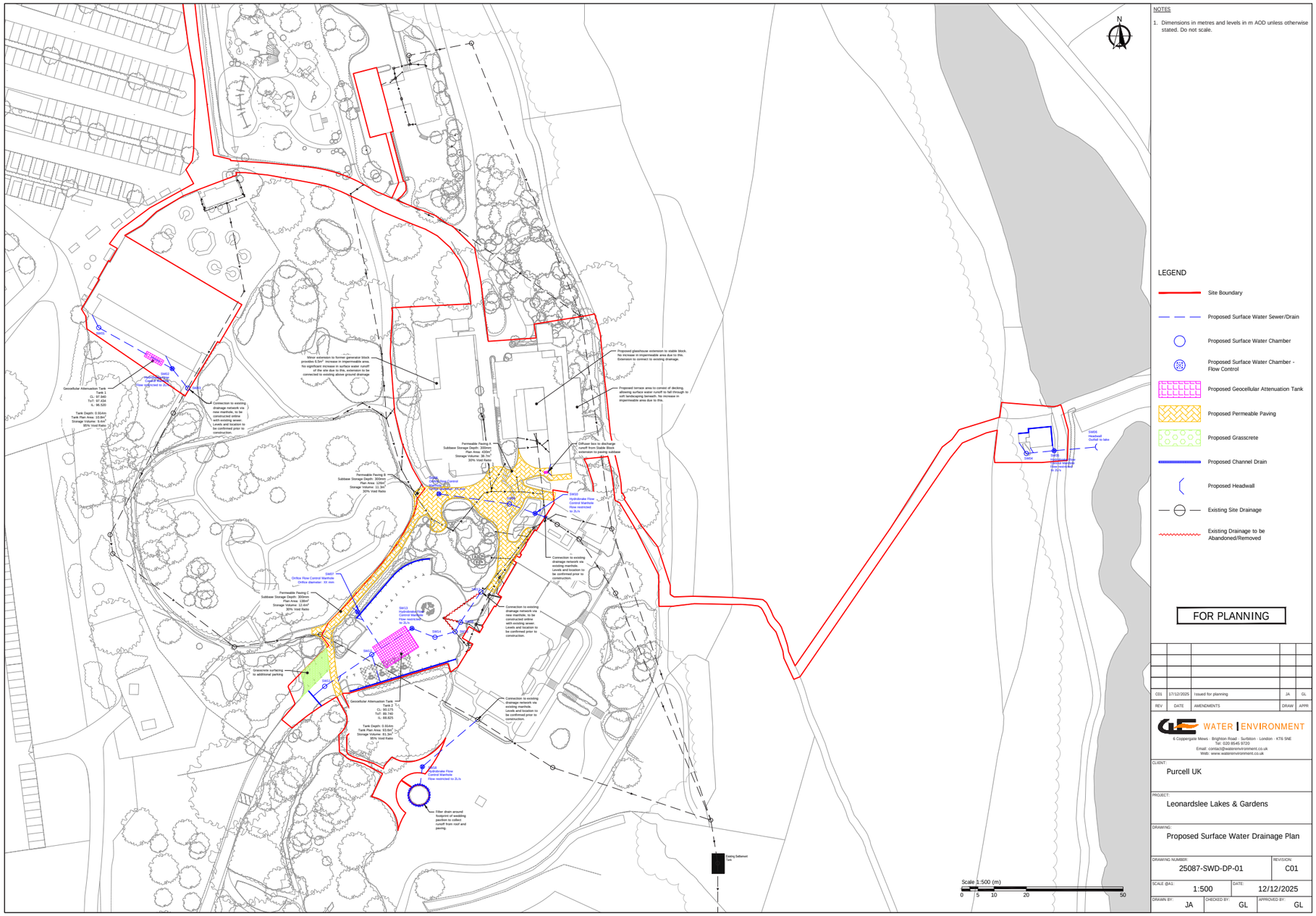
7.4 SURFACE WATER DRAINAGE STRATEGY

Please refer to the Flood Risk Assessment and Drainage Strategy report prepared by Water Environment Limited in December 2025.' And add the attached plan to this page.



Proposed Surface Water Drainage Plan by Water Environment

7.5 FOUL DRAINAGE STRATEGY

7.5 FOUL DRAINAGE STRATEGY

Currently, foul water is dealt with via a number of treatment plants around the site.

Engine House

There is no waste water treatment facilities near the existing Engine House Cafe, therefore a new system will need to be introduced. A site visit and report has been undertaken by a wastewater consultant.

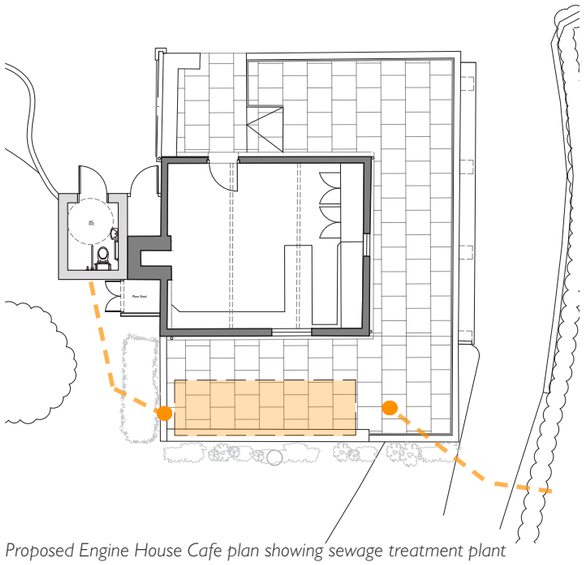
The recommendation was a sewage treatment plant is located under the new terrace extension. The proposed tank has been appropriately sized to accommodate the visitor numbers within the gardens.

The discharge outlet would be a discreet gabion wall with pipe outlet, discharging into the existing lakes as these have been confirmed to be flowing all year round.

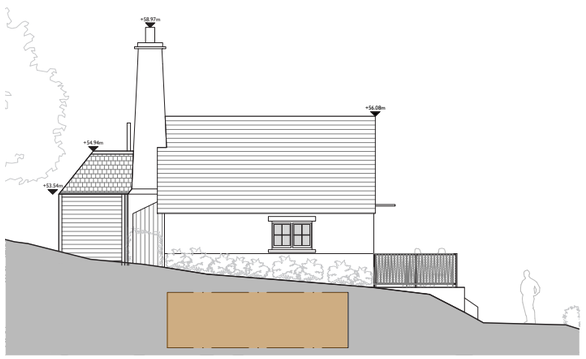
For additional information and the full report, please refer to: Review of Engine House STP and General Binding Rules Compliance Report - Dirk Daude Wastewater Consultancy Services

Other Areas

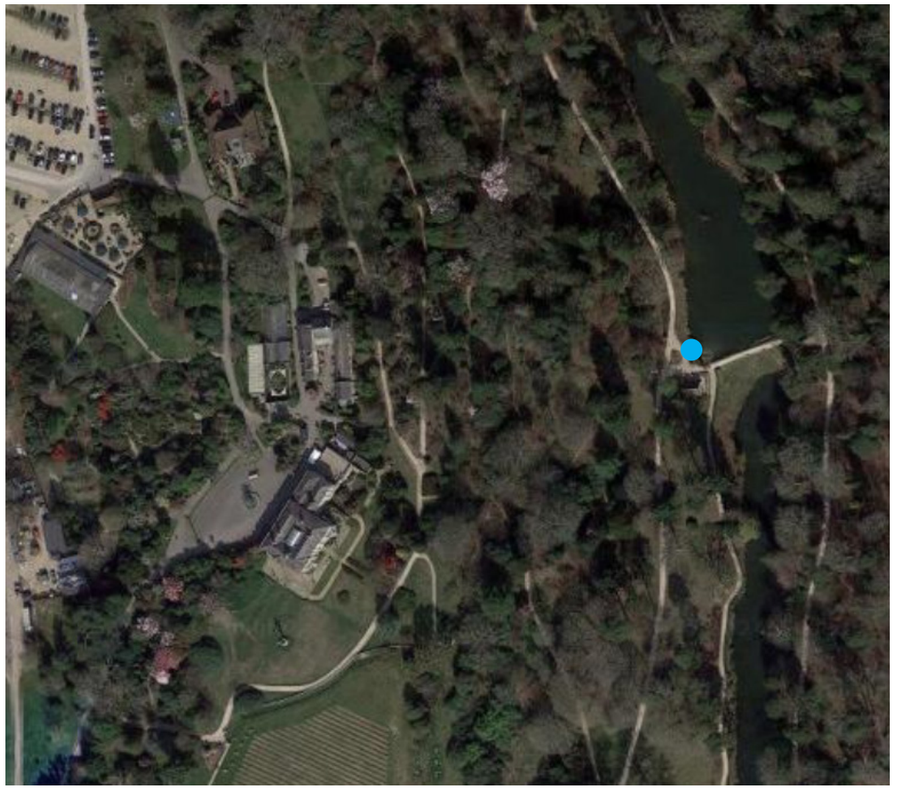
Please refer to the Flood Risk Assessment and Drainage Strategy report prepared by Water Environment Limited in December 2025 for a wider view on drainage to the estate.



Proposed Engine House Cafe plan showing sewage treatment plant



Proposed Engine House Cafe elevation showing sewage treatment plant



Aerial view showing Engine House (Blue dot)

7.6 OUTLINE ENERGY STRATEGY

Existing Energy Strategy
The primary source of energy to the site is electricity. Leonardslee House is heated via an oil heating system, the existing Clocktower Cafe and Cafe overspill areas are heated by electric heaters.

The new developments to the workers area will be designed to comply with modern building regulations, taking a fabric first approach to sustainable design. The outline energy strategy for each building is set out below:

Stable Block
The proposals for the Stable Block include the addition of a winter garden to the central courtyard and an external terrace to the East.

The winter garden will not be heated nor will the terrace, therefore there will be no internal increase in floor area, therefore no additional heating/cooling.

The existing perspex glazed roof will be replaced with an insulated slate roof with double glazed conservation rooflights. Double glazed aluminium windows will provide thermal separation to the winter garden.

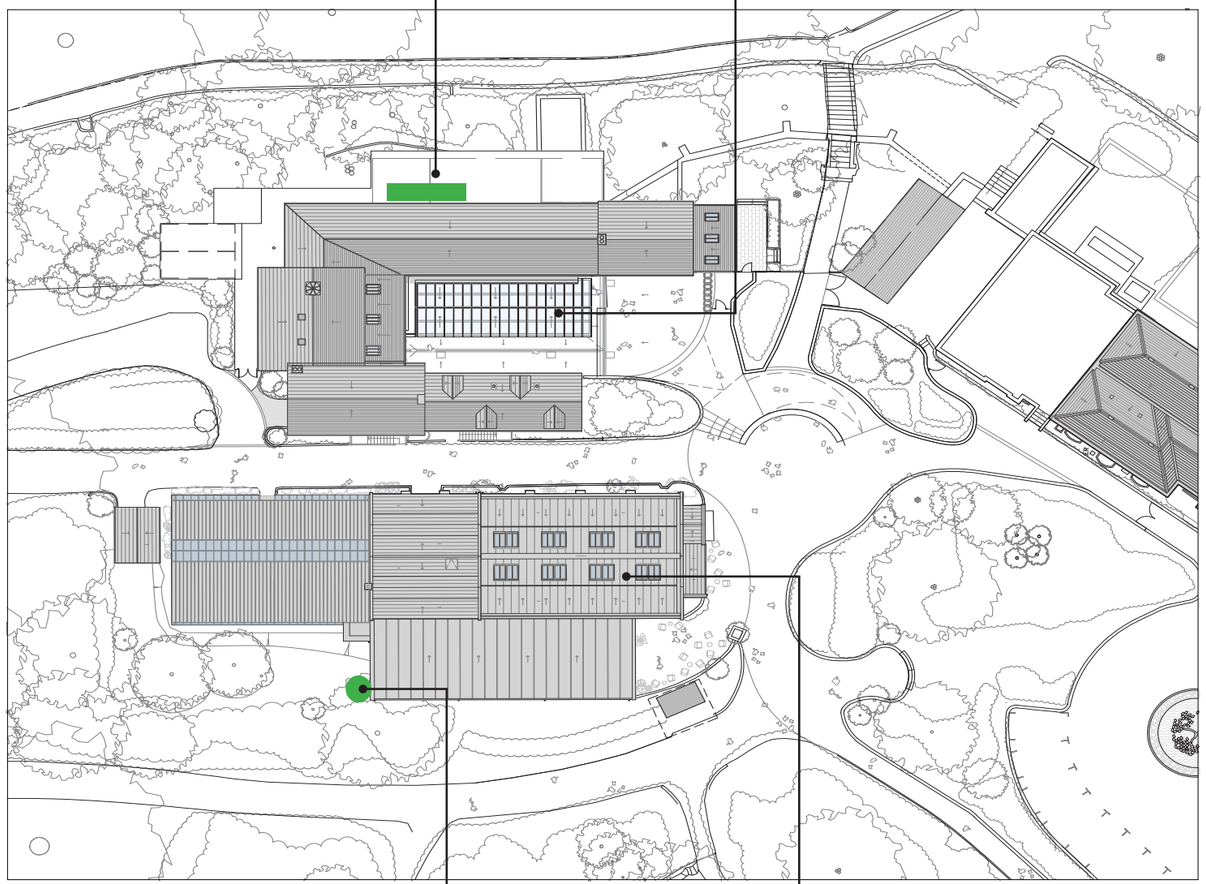
There will be natural cross ventilation to the winter garden with all other openable windows providing natural ventilation.

Former Generator Block
The proposed events space and Alpine House have been designed to accommodate passive, natural ventilation, with windows at low level and openable rooflights at high level to allow air to naturally flow. In the summer months these openings can be used for purge ventilation during the night. The ground floor windows face east, allowing solar gain in the mornings whilst not overheating in the afternoons.

The Former Generator Block will be heated/cooled via an electrically operated heat pump system.

Garden Shop Building
Given the single storey nature of the new proposals timber framed construction will be used to reduce foundation depths, whilst allowing lightweight, airtight construction with high levels of insulation, minimising energy usage. Openable windows will provide natural ventilation. The space will be heated and cooled with air source heat pumps.

Engine House
A small electric heater will be provided to the new accessible WC only. No changes are proposed for the main cafe area building.



Proposed energy site plan

7.7 VENTILATION AND EXTRACTION STATEMENT

This statement has been prepared to support the Design and Access Statement for the proposed changes at Leonardslee Lakes and Gardens. This supports the enlargement of the Stable Block kitchen and the introduction of a finishing kitchen to support the new events space within the Former Generator Block.

This statement aims to address concerns regarding noise, odour, and fumes from the premises as a result of the proposed change of use. This statement is also written in conjunction with below diagrams which demonstrate the proposed ventilation system.

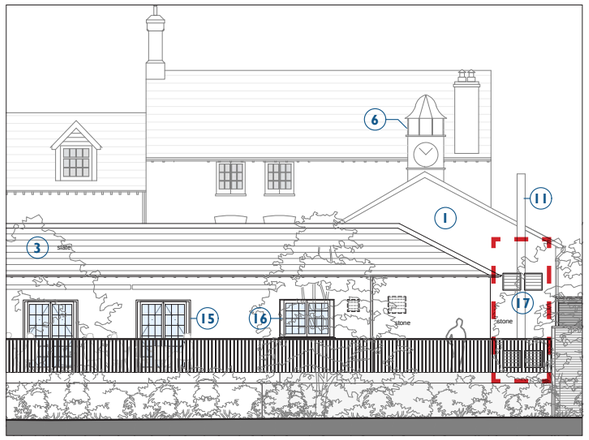
Stable Block
Due to the refurbishment of the Stable Block café, the preparation kitchen is moving from its current location in the east corner to the centre of the building (where the servery currently is).

As there are bats present to the roof space this cannot be utilised for extraction purposes. Therefore, we are proposing to box out the northeast corner of the new café kitchen in order to house the new mechanical intake and extract vents. There will be an intake vent at low level and an extract vent at high level. The associated external vents will be visible on the associated gable end which will be hidden from public view due to being a back of house space/fire escape. There will also likely be vegetation screening it.

To the bathrooms in the west of the Stable Block, intake and extract will occur through a mechanical system through one centralised external vent below the stairs leading to Carriage Cottage. Again, this will ensure their visual impact is minimised as much as possible also helped by the adjacent vegetation screening it.

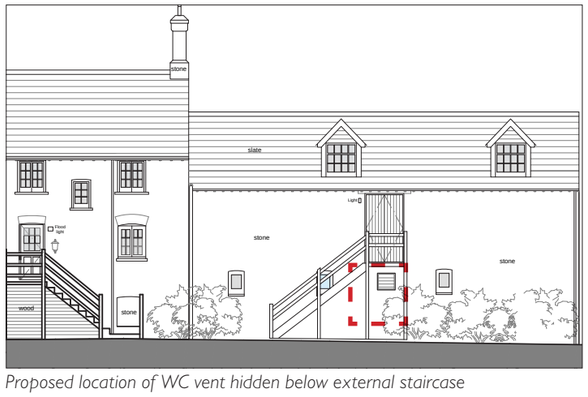
Former Generator Block
As part of the refurbishment to the Former Generator Block, new events spaces are proposed and to support these a finishing kitchen to the centre of the building, where the Doll's House Museum currently sits. As a finishing kitchen only, no cooking will take place here, only heating up of food for the associated events taking place which will be prepared elsewhere.

The roof space will be used to both intake and extract air from the room. The existing historic ventilation detail to the pitched roof will be utilised as part of the proposal. Additional in-line vent tiles may also be utilised if required which will match the existing in material, size and colour as far as possible, and be located on the inner roof slope for less visual clutter.



Proposed location of kitchen vents to gable end


Existing historic ventilation detail to the pitched roof of the Former Generator Block



Proposed location of WC vent hidden below external staircase


Example of an in-line vent tile


Example of an external cast iron ventilation grille