

PLANNING COMMITTEE UPDATE REPORT

App Number	25/00290/FUL
Item Number	Item 3
Address	6A Bucknills Close 11A And 13 Whitehorse Drive, Epsom, Surrey
Proposal	Demolition of residential dwelling at 6A Bucknills Close and office building at 13 Whitehorse Drive and the construction of nine residential units (3 x 2-bed, 6 x 3-bed) (Class C3) together with car parking, landscaping and access arrangements.
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UPDATE

1. Additional Third Party Comments

- 1.1 Three letters of objection have received since the publication of the Agenda Report. Two of the objections raise no new material planning concerns beyond those reported in the Agenda Report.
- 1.2 The remaining objection raises concerns in respect to the proposed drainage strategy and concerns to the use of underground storage, which is to be connected to a small on site pumping station for pump out controlled rate of 2l/s to an existing Thames Water combined sewer. The third party concerns are set out in bullet points below in bold, with the applicant's drainage engineer's response set out underneath:

- **It is unlikely that the storage facilities could be entirely sealed from the surrounding ground, so will tend to fill with ground water during the winter to some extent. The pumping station would of course evacuate this, but pumping ground water to the public sewer would not be appropriate or acceptable to Thames Water.**

The water entering the chambers will be from rainfall falling on the site and the chambers will be collecting water that they are supposed to collect, i.e. surface water run-off from the site. They will not be collecting groundwater - the water table is considerably lower than the proposed drainage structures, at around 20m below ground level.

- **Solids in the form of sand, silt and possibly grit will inevitably be washed into the system. The velocities induced by emptying at 2l/s would be minimal, and insufficient to move accumulated siltation. The system would need to be inspected regularly and flushed as required, as acknowledged in the Drainage Report.**

Sediment transport has been considered and a velocity of 0.75 m/s is usually considered sufficient to prevent the deposition of solids in pipework (self-cleansing velocity) and the diameter of pipework required to achieve this can be easily determined using the formula $V=Q/A$, where V is the

velocity is m/s, Q is the discharge in m³/s and A is the cross sectional area of the pipe under consideration.

Using this formula gives a required pipe diameter of 58mm for a gravity system; but we are dealing with a pumped discharge here and not a gravity one, so pump curves/pump efficiency, static and friction heads also have to be considered. This is something that would normally be considered when selecting the pump and diameter of the rising main to ensure optimum efficiency of the system.

I would expect the pumped main on this site to have an OD (outside diameter) of somewhere between 40 and 63mm but the actual diameter will be determined by the pump and its impeller size, the optimum RPM it operates at, its efficiency and the dynamic head it has to operate against.

Not all pumps are created equal and each pump manufacturer will have a several different pumps which can be configured with different impellers to meet the different criteria. There are a quite a few variables to consider, but selecting the pump configuration and rising main combination will be selected to ensure that the system achieves (a) self-cleansing velocity and (b) efficient sediment transport in operation (i.e. so that sediment remains suspended and doesn't settle in the pipes).

- **Small pumping stations capable of handling stormwater are notoriously unreliable and tend to become blocked. In such circumstances, the system would fail and the site would start to pond with water above ground until such time that the blockage was cleared. This would directly impact access to the houses, even though unlikely to flood to the extent of flooding the houses themselves.**

Blockages in surface water systems tend to be caused by accumulation of silts and organic debris. These will be screened out before they arrive in the pump chamber by the use of sumps within the system (e.g. at the base of rainwater stacks and in chambers); and each of the below ground tanks will be wrapped in a geomembrane to prevent the migration of fines into the system. The pump chamber itself will also have a sump.

Maintenance and servicing of the pump (or pumps depending on what system is selected) will be required and this is noted in the report. Maintenance will include regular inspections of the chamber and the removal of any accumulated silt/debris.

The pump/s will, as is usual practice, be fitted with telemetry to warn of faults, failure, or when maintenance is required, so that action can be taken in a timely manner. Overland flows in the event of exceedance events and/or failure of the system have been considered and are discussed in the 'Management of Surface Water Run-off' report. Flood resilience and resistance is discussed in section 3 of the Flood Risk Assessment.

- **Thames Water has been asked whether they would adopt such a pumping station. They advised that they had no record of any application for adoption as yet, but it was highly unlikely that it would meet their adoption criteria.**

It is not intended to offer the system for adoption. This is usual practice. If it was to be offered for adoption this would be via an agreement under section 104 of the Water Industry Act 1991 and the whole system would be designed and constructed to comply with the requirements of the current Sewerage Sector Guidance (SSG) published by Water UK which has been the water industry standard since 1st April 2020, superseding the former publication 'Sewers for Adoption'.

- **The Drainage Report suggests that a management company would therefore maintain the entire surface water disposal, but the system would be prone to numerous areas of failure. It is not resilient design, and failure could affect access to the entire site. It begs the questions of who such a maintenance company would be responsible to, and at who's cost?**

The management company will include the owners who by default will have a vested interest in the maintenance of the system. This will also be controlled through Condition 5 of the planning permission.

1.3 Officers are aware that the Lead Local Flood Authority have advised that the proposed drainage scheme is not the most sustainable solution for the site when considering the SuDS hierarchy. Notwithstanding this, the Lead Local Flood Authority remain satisfied that a suitable surface water drainage scheme could be properly implemented on site and maintained throughout the lifetime of the proposed development.

1.4 Members can be confident that Condition 5, as set out on page 87 of the Agenda Report, provides appropriate control over the final design of a suitable surface water drainage scheme, which is to be agreed with the Lead Local Flood Authority, prior to the commencement of development on site. Such a condition is typically applied to planning applications within Critical Drainage Areas.