



Former Wye College, Wye (Wye 3)

Foul and Surface Water Drainage Strategy

Version 1

Prepared on behalf of Telereal Trillium

Hobbs Parker Property Consultants LLP and RMB Consultants (Civil Engineering) Ltd

November 2017

HPPC Ref: 30831

Date: November 2017



Contents

1. Introduction
2. Local Policy Documents
3. Strategic Approach to Foul and Surface Water Drainage
4. Site Appraisals
 - a. Land North of Occupation Road
 - b. Wye Free School
 - c. Land South of Occupation Road
 - d. Former Russell Laboratories and Former Students Union, Olantigh Road
 - e. Former Science Laboratories, Olantigh Road
 - f. Listed Buildings, Olantigh Road/High Street

1 INTRODUCTION

- 1.1 This report sets out a strategic review of the foul and surface water drainage associated with development/redevelopment of the Former Wye College, Wye (Wye 3). It has been prepared as a supporting document, in conjunction with the Masterplan prepared on behalf of Telereal Trillium, pursuant to the Wye Neighbourhood Development Plan 2015-2030.
- 1.2 At this stage, it is considered appropriate to prepare a strategic overview of foul and surface water drainage considerations; the subsequent preparation of individual planning applications for components of the Masterplan area will be the subject of detailed foul and surface water drainage appraisals, within the overall context of this strategic report.

2 LOCAL POLICY DOCUMENTS

Ashford Borough Council Core Strategy

- 2.1 The management of surface water across the development area has to comply with a number of local policy documents adopted by Ashford Borough Council.
- 2.2 Policy CS20 of the Core Strategy, adopted by Ashford in 2008, covers sustainable drainage.

POLICY CS20: Sustainable Drainage

All development should include appropriate sustainable drainage systems (SUDS) for the disposal of surface water, in order to avoid any increase in flood risk or adverse impact on water quality.

For greenfield developments in that part of the Ashford Growth Area that drains to the River Stour, SUDS features shall be required so as to achieve a reduction in the pre-development runoff rate. On all other sites in the Borough, including those in the south-western part of the Growth Area that drains to the River Beult, developments should aim to achieve a reduction from the existing runoff rate but must at least, result in no net additional increase in runoff rates.

SUDS features should normally be provided on-site. In the Ashford Growth Area if this cannot be achieved, then more strategic forms of SUDS may be appropriate. In such circumstances, developers will need to contribute towards the costs of provision via Section 106 Agreements or the strategic tariff. In all cases, applicants will need to demonstrate that acceptable management arrangements are funded and in place so that these areas are well maintained in future.

SUDS should be sensitively designed and located to promote improved bio-diversity, an enhanced landscape and good quality spaces that improve public amenities in the area.

Sustainable Drainage SPD

2.3 Ashford Borough Council adopted its Sustainable Drainage Supplementary Planning Document (SPD) in October 2010. The main purpose of the SPD is to provide guidance on the measures and opportunities available to planners and developers to integrate sustainable surface water management into their development. The document specifically provides guidance for those developments required to comply with Policy CS20.

2.4 The key objectives of the SPD are:

- *To ensure all new developments are designed to reduce the risk of flooding, and maximise environmental gain, such as: water quality, water resources, biodiversity, landscape and recreational open space.*
- *To ensure that all new developments are designed to mitigate and adapt to the effects of climate change.*
- *To provide guidance to developers on what will be expected to deliver the Core Strategy Policy CS20 standards, and the information that is required to be submitted with applications.*

2.5 The SPD sets out the runoff standards applied to different parts of the Borough. The standards applicable to brownfield sites outside identified growth areas are shown in Table 1.

Site	Acceptable runoff rate
Previously developed	<p>'Best endeavours' to achieve 6 l/s/ha.</p> <p>Failing that, aim to achieve a reduction from the existing run-off rate for the site (where this can be established);</p> <p>As an absolute minimum, must not lead to a net increase in run-off rate above the existing rate for the site (where this can be established) or 10.26 l/s/ha (where the existing rate cannot be established).</p>

Table 1. SPD runoff requirements.

2.6 The SPD identifies the most appropriate SuDS (Sustainable Urban Drainage Systems) for the Borough as:

- Green roofs
- Water butts
- Swales

- Wet ponds
- Detention basins

2.7 The aim of site specific surface water management strategies is to provide storage to limit peak runoff from the site to as close as possible to greenfield runoff rates. This is in line with the Defra and DCLG Non-Statutory Technical Standards which state:

Peak flow control

S3 *For developments which were previously developed, the peak runoff rate from the development to any drain, sewer or surface water body for the 1 in 1 year rainfall event and the 1 in 100 year rainfall event must be as close as reasonably practicable to the greenfield runoff rate from the development for the same rainfall event, but should never exceed the rate of discharge from the development prior to redevelopment for that event.*

Kent County Council Drainage & Planning Policy Statement – Local Flood Risk Management Strategy Guidance June 2017

2.8 The Kent County Council Drainage and Planning Policy Statement sets out guidance for drainage strategies and surface water management provisions associated with applications for major development; it is to be read in conjunction with the National Planning Policy Framework, and specific local policies.

2.9 Key points from the guidance on Drainage Strategy Development – Design Philosophy are:

- Kent County Council recommends that sustainable drainage is considered from the inception of any scheme as an interconnected system that provides additional benefits, rather than as individual, stand alone drainage measures.
- The drainage strategy should consider sustainable drainage techniques that work with the natural drainage of the site to retain surface water within the site and manage the risk of flooding during severe storms (both on and off site).
- It is important to identify and consider constraints which may impact the manner in which drainage is provided on site. The drainage strategy should take account of existing flow rates, either by incorporating them into the drainage system or designing the layout appropriately.
- During the assessment of any site, full reference should be made to any existing flood risk management information that may be available.
(4.4.1, Design Philosophy)

2.10 The following advice is set out with regard to connection to a public sewer or other drainage system:

- Infrastructure for new development should ensure that surface water is always drained and managed separately from foul water.
- Combined sewer systems, which carry both foul and surface water, have limited capacity and are more likely to lead to foul flooding; in our commitment to ensuring development is sustainable, we will therefore seek to reduce surface water discharges to combined sewer systems.

(Paragraph 4.4.4, Connection to a public sewer or other drainage system)

2.11 The Drainage and Planning Policy Statement sets out the following policy with regards to the strategic drainage hierarchy:

SuDS Policy 1: Follow the drainage hierarchy

Surface run off not collected for use must be discharged according to the following discharge hierarchy:

- *To ground,*
- *To a surface water body,*
- *A surface water sewer, highway drain, or another drainage system, or*
- *To a combined sewer where there are absolutely no other options, and only where agreed in advance with the relevant sewage undertaker.*

This selection of a discharge point should be clearly demonstrated and evidenced.

(Paragraph 5.2, Drainage Policies)

3 STRATEGIC APPROACH TO FOUL AND SURFACE WATER DRAINAGE

3.1 In summary, the Drainage Policy Guidance of Ashford Borough Council and Kent County Council requires the use of SuDS measures, to reduce surface water flows from development sites, to at least a level below that associated with their former use, if a brownfield site, with an aspiration to limit runoff to greenfield discharge rates and to no more than the existing greenfield discharge rate, where development of a greenfield site is involved.

3.2 These measures seek to prevent any risk of surface water flooding; in addition, where there are combined sewer systems, carrying both foul and surface water, reducing surface water discharges

will reduce the likelihood of foul water flooding.

- 3.3 Foul water flooding has been reported in Wye, at times of heavy rainfall; indicating that this is associated with increased surface water flows, through combined foul and surface water sewers. Accordingly, it is a guiding principle of the drainage strategy for the redevelopment of the Former Wye College land and buildings that surface water flows will be reduced, from existing levels, as further detailed in the following section, which outlines a site appraisal for each of the component parts of the Wye College Masterplan area.
- 3.4 Achievement of this objective will ensure that the proposals for the Masterplan area, taken as a whole, have a reduced impact on the existing drainage network within Wye, and accordingly lead to a reduced risk of foul water flooding.

4 SITE APPRAISALS

- 4.1 This section sets out a strategic overview of drainage principles to be applied to the development/redevelopment of each of the major land parcels, within the Masterplan area.
- 4.2 A detailed appraisal, following the principles outlined for each site/land area, will accompany future detailed planning applications.

a. Land North of Occupation Road

- 4.3 Land North of Occupation Road is proposed in the Masterplan for the development of 40 new dwellings, with density reducing from west to east, and including substantial areas of public open space.
- 4.4 Approximately 60% of the site is presently occupied by a combination of glasshouses and research buildings, with associated hard standings; with approximately 60% of the site covered by buildings and hard standings.
- 4.5 The remaining part of the site (approximately 40% of total site area) is presently a greenfield site formerly used as a meteorological station.
- 4.6 Accordingly, the estimated total coverage of buildings and hard standings, across the development site as a whole, is in the order of 20-25%; the key principles for the foul and surface water drainage strategy are:

- Achieve net reduction in built area (houses, roads, and other hard standing areas including car parking);
- On site provision of combination of soakaways, swales, and other SuDS features, all within existing site area (substantial areas of public open space available to assist in meeting this requirement).
- Overall net reduction in surface water run off.

4.7 Detailed proposals will also be developed for the small car park proposed for North Downs Way visitors, on the North side of Occupation Road.

b. Wye Free School

4.8 Wye Free School has planning permission for the construction of new classrooms, sports hall, car parking and multi use games area; with new drainage connections to the existing sewer in Olantigh Road.

c. Land South of Occupation Road

4.9 Land south of Occupation Road, within the Former Wye College area, comprises:

- Existing premises in use by small businesses, between Occupation Road and adjoining allotments.
- Four existing dwellings (2 pairs of semi-detached dwellings)
- Horticultural/business use, formerly occupied by BCP, to be re-let for similar purposes – comprising substantial areas of glass houses, and other buildings.

4.10 With regard to the existing small business premises, this site has a very high degree of existing site coverage (in excess of 80%); in the short term, these premises will remain in their existing configuration, and hence lead to no increase in foul or surface water to the sewer network.

4.11 In the longer term, it is intended that these premises will be redeveloped for business purposes; a lower percentage site coverage is envisaged, creating the opportunity for the introduction of sustainable drainage measures, and also thereby reducing surface water run off; these proposals would therefore result in reduced surface water flows, and also reduced foul drainage, through a reduced floor area.

- 4.12 No changes are proposed to the two pairs of existing dwellings.
- 4.13 The former BCP premises are presently anticipated to remain in their existing configuration; however, the Masterplan envisages their redevelopment in due course, albeit on a reduced area (excluding part of the site which is presently subject to a covenant restricting its use to agricultural or horticultural purposes only). This site has a very high site coverage ratio of hard standing/buildings to undeveloped areas (approximately 75%); the redevelopment, on a reduced site area, will therefore result in a very substantial reduction in surface water outflow, in the order perhaps of 50%.
- 4.14 Each of the sites/buildings south of Occupation Road presently drains to a sewer on Occupation Road, which links to a sewer in Olantigh Road.

d. Former Russell Laboratories and Former Students Union, Olantigh Road

- 4.15 The Masterplan proposal for these existing buildings is their retention, in large part; with one smaller single storey building proposed to be demolished. Accordingly, the proposals in the Masterplan will lead to a reduction in surface water run off; there is scope for the introduction of SuDS drainage measures, either on the site of the single storey building to be demolished, or the site of the former swimming pool, to the east of the former Students Union building. A combination of these factors will result in a net reduction in surface water flows.
- 4.16 Foul flows are predicted to be similar for the proposed business re-use, compared to the former educational use.
- 4.17 This site and buildings drain to the sewer on Olantigh Road.

e. Former Science Laboratories, Olantigh Road

- 4.18 The Masterplan proposes demolition of existing buildings, and redevelopment for a residential care home/extra care housing. The site presently has a high degree of site coverage (approximately 80%); the form of redevelopment envisaged would increase the amount of green space at the site, and afford greater opportunity for SuDS measures on site.
- 4.19 It is estimated that the proposed residential care home/extra care housing use would result in a higher foul drainage outflow; however, this would be compensated for by the reduced surface water outflow.

f. Listed Buildings, Olantigh Road/High Street

- 4.20 The listed buildings complex, at the heart of Wye College was formerly in use for a mixture of educational accommodation, and student residential accommodation. The Masterplan proposes conversion of the existing buildings, for mainly residential uses, with some areas for communal use.
- 4.21 The site is currently the subject of a planning application for this use; a fully detailed surface water drainage strategy is presently under preparation, in support of this application.