



RIDGE

**DRAINAGE TECHNICAL NOTE
DUNSBURY WAY HAVANT**

November 2022

DRAINAGE STRATEGY – TECHNICAL NOTE

DRAINAGE TECHNICAL NOTE DUNSBURY WAY HAVANT

November 2022

Prepared for

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VERSION CONTROL

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DRAINAGE STRATEGY – TECHINCAL NOTE

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DRAINAGE STRATEGY – TECHNICAL NOTE

1. INTRODUCTION

This technical note has been prepared to supplement the drainage strategy document 5018335-RDG-XX-XX-DOC-C-9950 dated 14/07/2022 to respond to the comments raised by the LLFA & EA.

2. LLFA COMMENTS

The LLFA have reviewed the submitted documents; FRA & DS along with the Site Investigation. They raised two points as below which need responding to:

- Clarification on whether an increase of 10% has been included for impermeable areas to account for urban creep in calculations.
- Water quality information to be provided with reference to the simple index approach.

3. RESPONSE TO LLFA

3.1. Creep

We refer to the LASOO Non Statutory Technical Standards which confirms that a creep allowance of 0% is allowed for flats and apartments. The calculations have therefore not had an allowance for creep included. This note supersedes that stated in section 7.5 of the earlier report.

3.2. Water quality

The Proposed Development utilises flow paths through permeable paving and a hydrocarbon interceptor prior to discharge to the river.

The proposed hydrocarbon interceptor will ensure that the receiving watercourse of the surface water flows is suitably protected from this site.

Subsequently the vulnerability of water quality within the river is considered to be low.

The Simple Index Approach has been utilised to assess the water quality management set out in the SuDS Manual, with appropriate cross referencing to the relevant 'Design Conditions'.

The results of these assessments are in the following tables and confirm that the proposed roof and parking areas are suitably designed to maintain water quality.

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SUMMARY TABLE

Land Use Type	Residential roof
Pollution Hazard Level	Very Low
Pollution Hazard Indices	
TSS	0.2
Metals	0.2
Hydrocarbons	0.05
SuDS components proposed	
Component 1	Hydrocarbon interceptor (SPEL Stormceptor Class 1) (206 C1/SC)
SuDS Pollution Mitigation Indices	
TSS	0.8
Metals	0.6
Hydrocarbons	0.9
Combined Pollution Mitigation Indices	
TSS	0.8
Metals	0.6
Hydrocarbons	0.9
Acceptability of Pollution Mitigation	
TSS	Sufficient
Metals	Sufficient
Hydrocarbons	Sufficient

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SUMMARY TABLE

Land Use Type	Residential parking
Pollution Hazard Level	Low
Pollution Hazard Indices	
TSS	0.5
Metals	0.4
Hydrocarbons	0.4
SuDS components proposed	
Component 1	Pervious pavement
SuDS Pollution Mitigation Indices	
TSS	0.7
Metals	0.6
Hydrocarbons	0.7
Combined Pollution Mitigation Indices	
TSS	0.7
Metals	0.6
Hydrocarbons	0.7
Acceptability of Pollution Mitigation	
TSS	Sufficient
Metals	Sufficient
Hydrocarbons	Sufficient

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4. EA COMMENTS & RESPONSE

The EA raised concerns based on the adjacent river which based on updated climate change allowances may lead to fluvial flooding of the site. Product 4 Data was requested from the EA as attached as Appendix A. As can be seen they stated that as the site is in Flood Zone 1, no product 4 data was available.

The surface water drainage strategy section 7.6 & 7.7 responds to how the site will cater for surface water flooding will be dealt with up to and including the 1 in 100 yr + CC allowance event and extreme events. This is complemented by the drainage strategy drawing and proposed exceedance flow drawings in appendix D.

We have however, reviewed the product 5 & 6 data that they did provide. As can be seen from the table and no location plan below, the proposed ground floor FFL of 15.3 and lowest proposed ground level of 14.8 (as shown on drawing no. 5018335 -RDG-XX-ST-DR-C-1100 REV P02) is well above even the 1 in 1000 yr event level.

MODEL LOCATION ID	0100YR (1 IN 100 YR FLOOD EVENT - LEVEL) mAOD	0100YR 0 (1 IN 100 YR FLOOD EVENT - DEPTH) m	0100YR CC (1 IN 100 YR FLOOD EVENT LEVEL + ALLOWANCE FOR CLIMATE CHANGE - LEVEL) mAOD	0100YR CC0 (1 IN 100 YR FLOOD EVENT+ ALLOWANCE FOR CLIMATE CHANGE- DEPTH) m	1000YR (1 IN 1000 YR FLOOD EVENT - LEVEL) mAOD	1000 YR 0 (1 IN 1000 YR FLOOD EVENT - DEPTH) m
RLS480	12.875	6.33	13.288	9.075	13.313	9.203
RLS3500	12.93	6.33	13.33	9.075	13.353	9.203
RLS3532i1	12.992	6.33	13.37	9.075	13.392	9.203
RLS3532	13.032	6.33	13.399	9.075	13.421	9.203

As flood levels from the river are well below the proposed ground levels, and the exceedance events are suitably catered for, it is not considered necessary to provide a flood warning plan or evacuation routes. All access and egress routes are suitably above the 1 in 1000 yr flood level.

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Figure 1 - Node Locations

APPENDIX A

EA Data

From: Partnership and Strategic Overview team, HIOW <psohiow@environment-agency.gov.uk>
Sent: 07 June 2022 08:52
To: Civils Winchester
Cc: SSD Enquiries
Subject: Product 4, 5, 6, 7 & 8 Request for Dunsbury Way, PO9 5AX - Our ref: SSD/262040
Attachments: Defence Map.pdf; Flood Map for Planning (Rivers and Sea).pdf; Risk of Flooding from Surface Water.pdf; Open Government Licence.pdf; Use of EA Information for FRAs.pdf

Dear Binam,

Enquiry regarding Produc 4, 5, 6 7 & 8 for Dunsbury Way, Leigh Park, Havant PO9 5AX (SU 71312 08228).

Thank you for your enquiry which was received on 12 April 2022.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004. The information is attached.

We can confirm that the above property/site is located in Flood Zone 1 - an area where the chance of flooding from both rivers and the sea has been assessed as less than 0.1% in any year (1 chance in 1,000 in any year).

The Environment Agency has no record of flooding to this property/area. Please note our records are not comprehensive and may not include all events. I recommend contacting the Lead Local Flooding Authority, "Hampshire County Council" or the Local Authority, "Havant Borough Council" for a more comprehensive flood history check.

Site falls under FZ1 – so no flood levels available

Defences – See attached map.

Product 5, 6, 7 can be downloaded here: <https://ea.sharefile.com/d-s9b7f7f44916b469ebfb294ca0c399f1e>

Product 8 - unavailable

Name	Product 4
Description	Detailed Flood Risk Assessment Map for Dunsbury Way, Leigh Park, Havant PO9 5AX
Licence	Open Government Licence
Information Warnings	The majority of our models will not have the new climate change allowances. +20% is not suitable for the majority of planning purposes and the new allowances to use should be checked here: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances
Information Warning - OS background mapping	<i>The mapping of features provided as a background in this product is © Ordnance Survey. It is provided to give context to this product. The Open Government Licence does not apply to this background mapping. You are granted a non-exclusive, royalty free, revocable licence solely to view the Licensed Data for non-commercial purposes for the period during which the Environment Agency makes it available. You are not permitted to copy, sub-license, distribute, sell or otherwise make available the Licensed Data to third parties in any form. Third party rights to enforce the terms of this licence shall be reserved to OS.</i>
Attribution	Contains Environment Agency information © Environment Agency and/or database rights. Contains Ordnance Survey data © Crown copyright 2017 Ordnance Survey 100024198.

Name	Product 5
Description	<i>Heritage and Lavant Model</i>
Licence	Environment Agency Conditional Licence
Conditions	1.0 You may use the Information for your internal or personal purposes and may only sublicense others to use it if you do so under a written licence which includes the terms of these conditions and the agreement and in particular may not allow any period of use longer than the period licensed to you.



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