

HW Planning  
5, Joyce House  
Barrack Square  
Ballincollig  
Co. Cork

Attention: Kayleigh Sexton.

Date: 04.04.2023

**Our** CL12L001 - Response to RFI  
**Ref:**

Dear Kayleigh,

**Re: Residential Development at Scholarstown House, Scholarstown Road, Dublin 16**  
**Planning Register Reference: SD22A/0401**

I refer to the above and in particular to the further Information request from South Dublin County Council related to same.

The following is our response to the issues which are related to our remit.

#### Item 7 – Traffic & Transportation Issues

See attached a copy of correspondence from Martin Hanley, Traffic & Transportation Consultant, which addresses the issues raised.

See also attached the following drawings in support of the correspondence from Martin Hanley:

- |  |                                     |
|--|-------------------------------------|
| - Drg., No. SH-DA-P01 Rev 03                 | Development Access                  |
| - Drg., No. SH-DA-P02 Rev 03                 | Development Access                  |
| - Drg. No. CL12-V1-XXX-DR-HLCE-CE-0004 Rev 1 | Proposed Vehicle turning simulation |
| - Drg. No. CL12-V1-XXX-DR-HLCE-CE-0008 Rev 0 | Proposed Pedestrian Access          |

#### Item 8 – Surface Water Drainage issues

##### Surface Water Drainage Calculations

The surface water drainage calculation for the site were carried out in Micro Drainage. The strategy taken for the surface water drainage calculations were as follows:

Surface water drainage is to be dealt with onsite with the use of a number of Suds features, including Swales, detention basins and permeable pavement. The onsite testing for infiltration rate of the site determined that the site was unsuitable for soakaway design on the site.

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As a result, all Suds measures used in the calculation allowed for no infiltration into the ground. However the site is currently a greenfield site and there is no reports of flooding within the site, therefore there should be some infiltration of water into the ground as a result. This allows for a conservative approach to the surface water calculations as outlined below and in the attached supporting storm water calculations.

The treatment of the surface water drainage is dealt in two separate drainage trains. The first drainage train is made up of four inline swales and are located at the front of the development. The swales have an overall storage capacity of 34m<sup>3</sup> and deals with the surface water run-off from the front section of the roof of the development. The second drainage train is made up of two detention basins and permeable pavement. The storage capacity of the second drainage train is 174m<sup>3</sup> and deals with the roof in all other areas of the building which is not dealt with in the first drainage train and also deals with the hard surfacing of the car park and road. Refer to figure 1 and drawing CL12-V1-XXX-DR-HLCE-CE-0001 for details of Suds features.

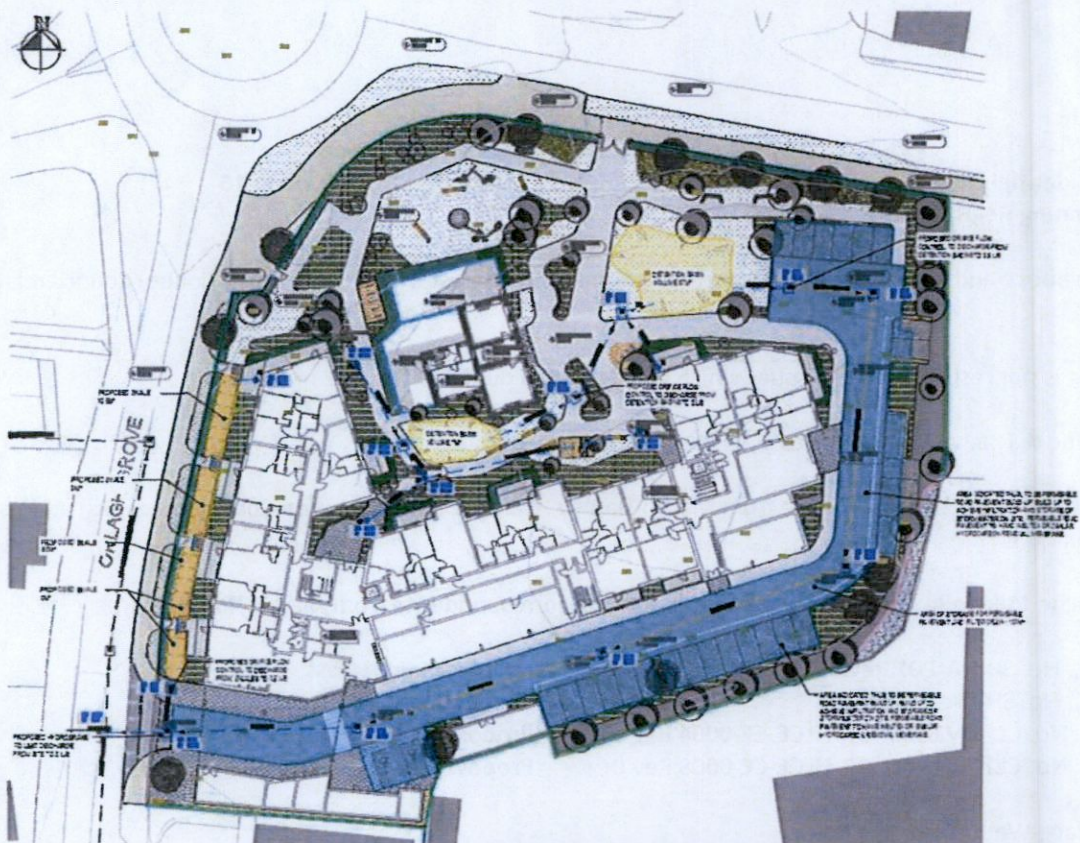


Figure 1 – Surface water drainage extract – Refer to drawing CL12-V1-XXX-DR-HLCE-CE-0001 for full details

The system is to have a number on line flow controls along each system. This is to back up the water along the system and utilise the full capacity of each of the Suds storage features. As well as this, both systems discharge to the same manhole which is restricted to 2l/s flow from the site into the public system. Additional features in the system to help improve the performance of the surface water drainage system include the following:

The collector drain which is within the permeable pavement will be installed at a fall along the length of the road, this will allow for extra capacity within this area which is not considered within the micro drainage calculation. The other feature which will help the system is that the outflow pipe from each of the swales is to be installed at a high level. This is to allow a certain amount of long term storage within the system to allow infiltration in to the ground which is not considered in the

micro drainage calculation. Green areas on the site are not considered in the storm water attenuation calculations as they are to be dealt with on site as per the existing conditions. SAAR for Dublin – as taken from Dublin Airport = 760mm

Rainfall data taken into consideration of the site is worked out through historical map data for the Scholarstown area through the design software. Details can be found on page 1 of the attached calculations.

Catchment Area Name	Catchment Area (m <sup>2</sup> )	Surface Area Material	Run off Coefficient	Area to be drained	Suds Feature it enters first	Feature Volume Capacity (m <sup>3</sup> )	Pipe Number Reference (Page 4 of calc)	Drainage Train
Roof (Red 1)	78	Green Roof	0.7	55	Swale	10.5	S8.0	1
Roof (Red 2)	133	Green Roof	0.7	93	Swale	9	S9.0	1
Roof (Red 3)	84	Green Roof	0.7	59	Swale	6	S10.0	1
<b>Total Train 1</b>	<b>295m<sup>2</sup></b>	-	-	<b>207m<sup>2</sup></b>	-	<b>34m<sup>3</sup></b>		-
Roof (Green 1)	56	Green Roof	0.7	40	Detention Basin 1	7	S1.0	2
Roof (Green 2)	365	Green Roof	0.7	255	Detention Basin 1	7	S2.0	2
Roof (Blue 1)	140	Green Roof	0.7	98	Detention Basin 2	67	S3.0	2
Roof (Blue 2)	360	Green Roof	0.7	252	Detention Basin 2	67	S1.005	2
Orange	757	Green Roof	0.7	510	Permeable Pavement	100	S4.0 S5.0 S6.0 S7.0	2
Permeable Pavement	1810	Permeable Paving	0.95	1720	Permeable Pavement	100	S1.008 S1.009 S1.010 S1.011	2
<b>Total Train 2</b>	<b>3488m<sup>2</sup></b>	-	-	<b>2875m<sup>2</sup></b>	-	<b>174m<sup>3</sup></b>	-	-
<b>Total Site</b>	<b>7085m<sup>2</sup></b>	<b>Various</b>	<b>N/A</b>	<b>3082m<sup>2</sup></b>	<b>N/A</b>	<b>208m<sup>3</sup></b>	<b>N/A</b>	<b>N/A</b>

Table 1 – Summary of Catchment Areas and Attenuation Details

Table 1 is a summary of all the catchment areas that are being dealt with by the stormwater network on the site and ultimately discharged to the public storm network. The detailed storm water calculations show that 208m<sup>3</sup> of attenuation is required to deal with the catchment areas of the development.

In support of the above, please refer to the following:

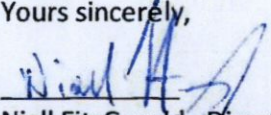
- Supporting storm water calculations
- CL12-V1-XXX-DR-HLCE-CE-0001 – Proposed Storm Drainage Layout
- CL12-V1-XXX-DR-HLCE-CE-0007 – Proposed Storm Catchment Areas

Finally, in light of the revisions made to the site layout, we attach a copy of the following:

- CL12-V1-XXX-DR-HLCE-CE-0002 Proposed Foul Drainage Layout
- CL12-V1-XXX-DR-HLCE-CE-0003 Proposed Water Supply Layout

We trust the above is informative and addresses the issues related to our remit.

Yours sincerely,

  
Niall FitzGerald - Director