

	LRD Notice of Response Ref PAC/LRD2/004/25	
No	DLR Water Services Department - Drainage Planning Opinion - Appendix C Internal Reports	Response
1	<p><i>The applicant is requested to contact drainage planning to discuss the issues of the features on site and discuss and agree how the features will be dealt with in an appropriate manner, in accordance with the requirements of our development plan policies as well as best practice. The "drain" should be assessed by a suitably qualified person to determine if the feature is a relevant waterbody. It is not acceptable to divert the flow into an attenuation system that has not been designed to cater for this flow.</i></p>	<p>The drain in question was assessed and determined to be a continuation of a land drain constructed below the recently completed Glenamuck Manor housing scheme. It was noted to be a 225mm diameter plastic pipe and drains part of a private property upstream called "Shaldon Grange". Discussions were held with the Water Services Department regarding this element and it was determined that to avoid any conflict with the proposed attenuation system, the existing drain would be diverted into a new 300mm diameter pipe that remains independent of the proposed attenuated system and this pipe will pass through the development to a new outfall into the Glenamuck Stream. Refer to Dwg.2411/101 for further detail.</p>
2	<p><i>The applicant has provided two different SAAR values in the application. Consistency in the data for calculations is required.</i></p>	<p>A SAAR of 994mm has been determined as accurate based on the latest available data from Met Éireann and is noted twice in the main report as such.</p>
3	<p><i>It should be noted that the Microdrainage has default Cv values of 0.84 for Winter and 0.75 for Summer. These should be amended to a value of 1.0, particularly where the applicants are proposing reduced PIMP (%) values. Maintaining the default Cv values reduces the run-off in simulations of rainfall events, giving an inaccurate simulation results which may lead to under sizing of the drainage system and attenuation storage. The applicant is requested to resubmit their MicroDrainage calculations using the 1.0, and site specific or local data, such as SAAR, Soil Type, rainfall Return Period Table (available from Met Éireann) rainfall intensity and other hydrological parameters. The applicant must clearly state and justify all inputs used in Microdrainage and agree these with Drainage Planning prior to submission of the final application.</i></p>	<p>The Cv values have been set to 1.0 for both summer and winter events in the calculations provided. The Met Éireann data has also been provided which include the SAAR=994, M5/60=16.0mm and r=0.276.</p>
4	<p>As standard, the applicant is requested to ensure that all surface water design proposals are in accordance with the requirements of Appendix 7: Sustainable Drainage System Measures of the County Development Plan 2022-2028.</p>	<p>Compliance with Appendix 7 of the CDP is demonstrated in detail in the <i>Report</i></p>

5	As standard, the applicant is requested to ensure that the proposed surface water design is in accordance with County Development Plan 2022-2028 Section 10.2.2.6 Policy Objective EI4: Sustainable Drainage Systems, such that the proposal meets the requirements of the Greater Dublin Strategic Drainage Study (GSDSDS) policies in relation to Sustainable Drainage Systems (SuDS). The design must incorporate SuDS measures appropriate to the scale of the proposed development such as green roofs, bioretention areas, permeable paving, rainwater harvesting, swales, etc. that minimise flows to the public drainage system and maximises local infiltration potential.	A full SuDS treatment train approach has been implemented in the design and is detailed in Chapter 7 of the <i>Report</i> .
6	Any changes to parking and hardstanding areas shall be constructed in accordance with the recommendations of the Greater Dublin Strategic Drainage Study for sustainable urban drainage systems (SuDS) i.e. permeable surfacing, and in accordance with Section 12.4.8.3 Driveways/Hardstanding Areas of the County Development Plan 2022-2028. Appropriate measures shall be included to prevent runoff from driveways entering onto the public realm as required.	Noted but no changes are proposed to the application parking/hardstanding areas.
7	The applicant has indicated, in the Taking in Charge drawing, that the lands where the attenuation tank for catchment 2 is located is not to be taken in charge. The applicant should specify whether the proposed area will be taken in charge or privately managed and provide the details of the management company that will maintain the proposed surface water drainage network as required. A wayleave should be provided if the area is not to be taken in charge.	This area is to remain as privately managed and subject to a successful planning decision; the details of the management company are to be agreed at planning compliance stage as will a wayleave.
8	<i>The applicant shall ensure that trees shall not be planted in the area over the attenuation tank. Trees shall be placed at a minimum distance of 2m from the edge of attenuation tanks. Tree protection barriers may be required, depending on the tree species and the expected extent of root spread, to be advised by the landscape architect.</i>	Noted
9	As standard, the applicant is requested to confirm that a utilities clash check has been carried out ensuring all utilities' vertical and horizontal separation distances can be provided throughout the scheme. The applicant should demonstrate this with cross-sections at critical locations such as junctions, site thresholds and connection points to public utilities. Minimum separation distances shall be in accordance with applicable Codes of Practice.	The application has maintained the required separation distances and a clash check has been carried out. Refer to Dwg.No.'s 2411/109 to 112 and 116 for further detail.
10	As standard, and as noted within the application, the applicant is requested to ensure that a Stage 1 Stormwater Audit is carried out for the development. In accordance with the Stormwater Audit policy, the audit shall be forwarded to DLRCC prior to lodging the planning application. All recommendations shall be complied with, unless agreed in writing otherwise with DLRCC.	A Stormwater Audit has been completed and the results submitted to DLRCC prior to lodgement of the Stage 3 submission. Refer to the Appendix 11.17 of the Report.

11	<i>As standard, the applicant is requested to submit long-sections of the surface water drainage system, clearly labelling cover levels, invert levels, pipe gradients and pipe diameters.</i>	Long-sections have been provided in the Stage 3 submission, Refer to Dwg.No.'s 2411/109 to 112.
12	<i>As standard, the applicant is requested to provide a penstock in the flow control device chamber and ensure that the flow control device provided does not have a bypass door. The applicant shall also clarify whether a silt trap is being provided in the flow control device chamber and if not to make provision for same.</i>	Penstock and removal of the bypass operation is noted and details of same are shown on Dwg.2411/108.
13	<i>As standard, the applicant is requested to provide fully dimensioned plans and sections of the attenuation storage system. All relevant inlet and outlet levels, dimensioned clearances between other utilities, and actual depths of cover to the tank shall be provided. The applicant shall include confirmation from the chosen manufacturer of the storage system that the specific model chosen, with the depth of cover being provided, has the required load bearing capacity to support the loading that may imposed upon it.</i>	Details of same are shown on Dwg.2411/108. Correspondence from the attenuation storage manufacturer has been included in the Appendix of this report
14	<i>As standard, the applicant is requested to show the options being proposed for interception and treatment with contributing areas on a drawing together with an accompanying text and tabular submission showing the calculations, to demonstrate that the entire site is in compliance with GSDS requirements. The applicant should note that over-provision in one location does not compensate for under provision elsewhere.</i>	Refer to Dwg.2411/106 for catchment measurements and interception tabature (also included in Section 6.19 and Appendix 11.2 of this report)
	Flood Risk Assessment	
	Based on the information contained in the Site Specific Flood Risk Assessment (SSFRA) submitted by the applicant, the conclusions therein are accepted. However, as previously noted in this report, the assessment did not account for certain drains in the models and attenuation calculations. This oversight needs to be addressed to ensure comprehensive and accurate flood risk analysis.	The noted drains do not connect with the proposed attenuated system and are therefore do not require adjustment to the drainage model.