

Land Use, Planning & Transportation Department,  
South Dublin County Council,  
County Hall,  
Town Centre,  
Tallaght,  
Dublin 24.

09<sup>th</sup> June 2022

LAND USE, PLANNING  
& TRANSPORTATION DEPT.

14 JUN 2022

**RE: Additional Information Response for Warehouse Development at Magna Avenue and Magna Drive, Citywest, Dublin 24.**

**Reg. ref.: SD22A/0065.**

**Applicant: Rockface Development Limited.**

Dear Sir/Madam,

Please find attached our additional information submission relating to engineering elements for the above referenced planning application at Magna Avenue and Magna Drive, Citywest, Dublin 24. Our enclosed documents form part of an overall planning compliance submission by Planning Consultant Thornton O'Connor.

The items raised in the additional information request are addressed as follows.

**Item No 1. Sustainable Drainage Systems**

**(a) SUDs Management Plan**

Developments provided for warehousing/distribution facilities require robust industrial structures coupled with hard wearing durable large yard areas. Consideration was given to SuDS devices which incorporate infiltration at source however we have opted for a solution that ensures managed filtration from HGV yards prior to any infiltration to ground or discharge from site. In such an industrial environment, items such as swales & infiltration trenches were deemed unsuitable due to possible pollution risks to the groundwater from constant HGV activity.

Run-off from the hardstanding areas will be collected by trapped road gullies and rainwater goods throughout the development and directed to on-site surface water attenuation facilities. These facilities will attenuate the 1 in 30-year storm event plus allow sufficient additional volume to attenuate the 1 in 100-year 6-hour event. The restricted discharge from site will be limited by proprietary flow control devices. The flowrate through these devices will be set to the specific limit calculated as per SuDS guidance demonstrated in our originally submitted Drainage Design Report.

**(b) Treatment Train**

The treatment train approach was applied to both the storm water network and the attenuation design to ensure that both run-off quality and quantity are appropriately addressed. An array of techniques was used to fulfil requirements of each element of the treatment train:

- ✓ Pollution prevention.
- ✓ Source control.
- ✓ Site control.
- ✓ Regional control.

Please refer to our Drainage Design Report for more detailed information.

**(c)** *Required Attenuation Systems*

Practical depths of detention basins being relatively shallow, leads to large surface areas to provide the required attenuation volume. For this reason, coupled with the nature of warehousing facilities demanding large open space buildings and large yards to be viable, a significant portion of the roof has been selected to provide a detention basin as demonstrated in the drainage design report. The full roof runoff could not be accommodated through the detention basin due to industry demands for yards space nor could direct runoff from the yard be allowed pass through the basin to avoid infiltration of an area with a hydrocarbon pollution risk. For the above reasons, the proposed facility is provided with a dual attenuation system working in tandem, i.e.:

- a) the detention basin for a half of the clean roof runoff and,
- b) Two "Stormtech" underground system with integrated isolation row filter, silt trap & petrol interceptor for predominantly the external yard where HGV's access and dock to the building.

Each attenuation system caters for surface water run-off from a specific predetermined independent sub-catchment. Regarding water quality control measures, the underground tanks can be cleaned out by suction hose/tanker if required from a series of standard maintenance inspections. In the case of the isolator row, the chamber is backwashed with a proprietary power jet wash and its water removed by suction hose/tanker. For the retention basin a maintenance plan will be implemented to ensure proper functioning, i.e., periodic visual inspections for the basin to ensure it is free from litter and debris, inlet and outlet structural integrity check, removal of sediment accumulation, and re-establish of permanent vegetation on eroded areas also.

Water quantity control is provided downstream of the attenuation facilities by providing the flow control devices, coupled with site infiltration devices discussed later in this document. The restricted outflow from the three attenuation systems will ultimately discharge to the existing surface water manhole located to the northern site's boundary at the public footpaths adjacent to Magna Drive.

Please refer to our Drainage Design Report for more detailed information.

**(d)** *Impervious surface required*

Due to the industrial nature of the proposed development, the yard surfacing for HGV access and marshalling must be concrete. Nevertheless, an area of pervious paving is provided to the car park area where traffic loads are relatively light, grasscrete surface is also proposed for carparking bays and fire tender access area, and a green roof is proposed for the ancillary office. These measures reduce the site hardstanding area to what we believe to be the maximum possible extent, considering the warehouse facility operational requirements.

**(e)** *Proposed SUDs elements incorporated*

- Tree pits – To the car parking area for source control as per landscaping details.
- Trapped Road Gullies – To collect run-off from all type of paved surfaces.
- Permeable Paving – To the access road in the carparking area.
- Grasscrete Paving – To the car parking bays and to the fire tender access.
- Green Roof – To the ancillary office roof.
- Restricted discharge – To the outlets of all attenuation systems for regional control.
- Silt trap and petrol interceptor – To the inlets of all attenuation systems for pollution prevention.

**(f)** *Proposed Water Strategy*

The proposed surface water management solution for the subject site provides both runoff Quality and Quantity Control. Quality control is provided by ensuring all surface water runoff is dealt with on site as described earlier in this document with reference to the specified underground attenuation systems with in-built “isolator row”, proprietary silt traps & petrol interceptors. Quantity control is also provided through the surface water underground attenuation systems and detention basin coupled with the downstream flow control device.

In considering the above surface water management solution we considered all SuDS devices and given the industrial nature of the proposed operations on this site, the above solution of surface water attenuation was decided on. This assessment involved consideration of construction levels for cut and fill plus associated levels for the open detention basin. Due to several factors in design such as shallow levels of attenuation ponds and vast areas of same governed by outfall levels and economic site cut/fill levels, the inclusion of underground attenuation was unavoidable to provide for most of the site extent incorporating water quality and quantity control measures.

**Item No 7. Access, Transport and Parking**

- (a)** In order to facilitate safe operation of both the car park and docking/loading bays, the car parking and associated circulation is fully separated from HGV activity. The

pedestrian access connectivity is provided from the existing footpath at Magna Avenue. The visibility splays were added at both car park and HGV access. Please refer to drawing inclusion list at the end of this document.

- (b) The swept paths demonstrate that the site plan allows for adequate access and circulation for emergency vehicles. The site can be accessed from the adjacent Magna Drive and from the car park access at Magna Avenue. There is an internal connection between Car Park and HGV yard exclusive for emergency vehicles.
- (c) The development warehouse is proposed with 10% vehicular parking spaces equipped with electrical charging points and there is an inclusion of 100% of spaces to allow for the provision of future charging points as requested by Local Authority.

Enclosed documents with this letter are as follows:

- Drawing ref. *D1720 D3 Drainage and Watermain Layout PL2*
- Drawing ref. *D12720 D2 Site Plan PL2*
- Drawing ref. *D1720 D2-1 Site Plan with Swept Paths PL2*
- Drawing ref. *D1720 D2-2 Access Details, Electrical Charging Areas & Sightlines PL2*
- Drainage Report PL2.

We trust the above is in order and look forward to your future correspondence.

Yours sincerely,



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**Kavanagh Burke Consulting Engineers**