

**ENCLOSURE 3: LETTER REGARDING SURFACE WATER MANAGEMENT PLAN
PREPARED BY BAKKALA CONSULTING ENGINEERS**

The Secretary
An Bord Pleanála
64 Marlborough Street
Dublin 1
D01 V902

5 January 2023

Re: City Quay planning application, An Bord Pleanála ref: ABP-315053-22, DCC ref: 4674/22, Surface Water Management Plan [SWMP]

Dear Secretary,

As civil and structural engineers acting for Ventaway in respect of the above-referenced application for planning permission, and we are writing to clarify the approach taken to surface water management planning for the project, and its conformance to the current Dublin City Development Plan 2022-2028, in particular appendix 13.

We welcome this opportunity to elaborate on the design rationale for a landmark project worthy of our City and our times.

Surface Water Management Planning

Surface water management planning for the project is described in two reports we commissioned from Byrne Looby on behalf of the client lodged in support of the application for planning permission: a *Flood Risk Assessment* and an *Engineering Assessment*. In respect of surface water management, these documents contain, respectively, a quantified strategy for flood resilience; and a description of surface water drainage system together with supporting calculations and drawings. The reports were prepared to demonstrate conformance of surface water drainage design of the project with normal good practice for sustainable drainage systems.

A detailed Surface Water Management Plan [SWMP] will be submitted to the Drainage Division of Dublin City Council for their written approval prior to submission of a commencement notice, as would typically be conditioned on a permission.

Salient design features

With reference to Section 3.2.1 and Appendix B of the *Engineering Assessment*, we have estimated that the design will reduce surface water runoff from the site by over 91% in comparison to existing conditions for the worst case 1 in 100-year storm event (a storm with 1% annual probability of exceedance). When consideration is taken of climate change, which we have done, the percentage reduction is in excess of 93%. This constitutes a significant reduction of surface water on the existing underground public drainage network. Site drainage for the development has been designed to mimic the performance of a green field.

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The following design parameters have been discussed with DCC Drainage Division and have formed the basis for quantitative pre-connection enquiry to Uisce Éireann, which has verified feasibility of the project vis-à-vis the capacity of the receiving surface water drainage network:

- Discharge is restricted to 2l/s for the 100-year storm event in accordance with DCC and Uisce Éireann requirements;
- A factor of 1.2 is applied to site specific rainfall data obtained from Met Éireann to account for climate change per DCC requirements;
- SuDS features include 50% green roof coverage and soft landscaping capable of absorbing the first 5mm to 10mm of rainfall events, per DCC requirements;
- The green roofs and a basement attenuation tank together provide storage for 127m³ of surface water, in order to achieve the discharge limit;
- Rainwater may be harvested for irrigation at roof-level and ground level landscape features;
- Surface water drainage and foul drainage have been designed as completely separate systems throughout the development, until discharge to the public combined sewer, per DCC requirements;
- Quantitative analysis of water and wastewater demand on public infrastructure has been deemed "feasible without infrastructure upgrade" by Uisce Éireann in their response to Pre-Connection Enquiry, Irish Water ref: CDS22000135;
- The Uisce Éireann confirmation has enabled determination of acceptable connection points to public drainage networks indicated in the narrative of the report or on the design drawings submitted with the application;

We note that the Drainage Division of Dublin City Council in their report on drainage design proposals ref: NM/dd dated 06/09/2022 states "There is no objection to this development, subject to the developer complying with the *Greater Dublin Regional Code of Practice for Drainage Works Version 6.0*", and subject to adherence a number of particular requirements listed in their report, all of which are achievable within the present designs.

We shall look forward to finalizing detailed proposals for SuDS designs in conformance with the Regional Code of Practice and in consultation with DCC Drainage Division, prior to submission of the SWMP for their approval, and to endeavor to ensure that our designs comply with Appendix 13 of the DCC Development Plan 2022-2028.

Sincerely,
Bakkala Consulting Engineers



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Managing Director

