

**To: The chairperson and members of  
North Central Area Committee**

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**Re: Report on flooding in Clontarf on 05<sup>th</sup> August 2023.**

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Firstly, Dublin City Council management and staff want to express their deep regret at the recent flooding of homes and car parks in Howth Road, Castle Court and Auburn, Clontarf, Dublin 3 on 5<sup>th</sup> August 2023. The disruption this has caused to the normal everyday life of affected residents and indeed the trauma that many have suffered, is fully acknowledged. As a team, we will do everything in our power to eliminate the possibility of this event reoccurring in the future.

**Background:**

The Wad River drains a catchment area of approximately 483 hectares, including parts of Ballymun, Santry, Donnycarney, and Killester to the seafront at Clontarf in North County Dublin. The Wad River which was originally an open channel, has been completely replaced with culverts and pipelines of varying dimensions over the 6 kilometre route from Albert College Park on Ballymun Road, to the seafront at Clontarf Road.

As a result of flooding events which occurred in August 2008, July 2009 and October 2011, due to extreme rainfall in the catchment causing the existing pipes and culverts along the Wad to become overwhelmed, Dublin City Council investigated ways to reduce flood risk in the catchment. Following investigation and analysis, the preferred option was the development of additional attenuation storage, improvements to the surface water network and increasing the flow capacity of the existing Wad River culvert in order to maximise its use to transfer storm flows to the seafront in Clontarf.

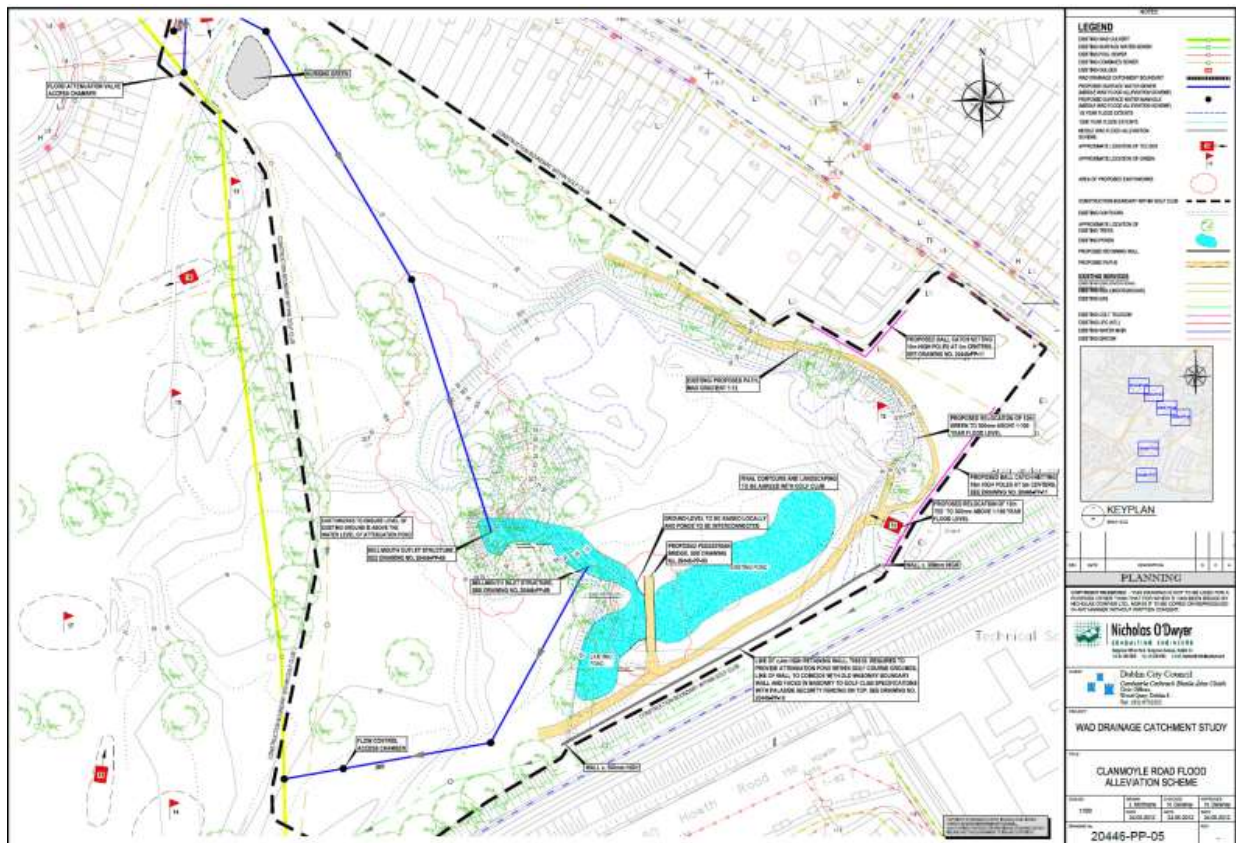
**Constructed and Proposed Flood Alleviation Works**

**Flood Retention Pond and flow controls – Phase 1:**

Dublin City Council constructed a new retaining wall and earthen bunds to create a flood retention pond within Clontarf Golf Course, with sufficient storage volume to reduce peak flows within the downstream capacity of the Wad River culvert. This was achieved by increasing the size of the existing quarry hole and incorporating a 4m high retaining wall between it and the Dublin to Belfast railway line. In an extreme rainfall event, the pond fills and floods this depressed area of the course, as outlined in the drawing below. The attenuation pond has the capacity to hold up to 35 million litres of rainwater during a storm event.

In addition, the project saw the construction of a new chamber on the existing Wad River culvert with a flow control device, inlet and outlet pipelines to limit flows downstream of the surface water culvert and transfer flows to / from the new attenuation pond in Clontarf golf course. This allows flows to drain back into the Wad culvert when the rainfall abates and capacity is available in the culvert.

The flood retention pond is designed to take flood waters which the main river Wad culvert cannot cope with and store them until levels in the culvert reduce so that they can be fed back into it.



### Down Stream Upgrades – Phase 2:

In addition to the construction of a flood retention pond on the Clontarf golf course, Dublin City Council also proposed to complete two future area of work downstream from the constructed pond, including:

- A new 30 m length of 1,500 mm diameter surface water culvert at Howth Road.
- A new 45 m length of 1,500 mm box surface water culvert outlet at the sea front at Clontarf.

The completion of these two areas of work will increase the flow capacity downstream and maximise the use of the existing Wad River culvert to transfer storm flows to the seafront at Clontarf.

In order to deliver the culvert outlet at the seafront at Clontarf, Dublin City Council was required to seek planning approval from An Bord Pleanála. Dublin City Council submitted the application in July 2022 and has subsequently responded to requests for further information from the board in November 2022. The Board granted approval for the scheme on 04<sup>th</sup> September, 2023.

### **Storm Antoni – 05<sup>th</sup> August 2023 – Analysis of Flow Routes**

On Saturday 5<sup>th</sup> August, 2023, rainfall associated with storm Antonio was recorded between 53mm and 62mm in the Clontarf area. This amount of rainfall equates to around 25 days of rain and it fell in 9 hours. This overloaded the existing storm network and associated flood alleviation measures and caused severe flooding in the Clontarf Area. The flood retention pond within Clontarf golf course overtopped and spilled onto the course and flowed over land to the boundary between the golf course and the railway line. The waters then entered the culvert under the railway line and flowed adjacent to the railway line, surcharging at the existing 600mm sewer, with the water levels rising to the level of the railway track. The waters then flowed along the railway line over ground and entered the Auburn Apartment building filling the basement and then flowing out the entrance and down the road, causing flooding in Castle Court.

In addition the culvert located in the rear garden of 102 Howth Road was overwhelmed and resulted in localised flooding at this property.

This is illustrated in the drawing presented at Appendix 1:

### **Ongoing Analysis, Inspections and Works**

Dublin City Council's Drainage Division has completed a number of surveys within the area and confirmed that there are currently no blockages or damages within the network and the network is capable of operating at its installed capacity. The Drainage Department has also undertaken temporary works at 102 Howth Road, to ensure that the maximum flow capacity is available in the network downstream from Castle Court.

The Flood Defence Projects Office has collated all the available telemetry and photographic data from the event of 05<sup>th</sup> August and in consultation with our design team are in the process of completing a review of the catchment and network operation on 05<sup>th</sup> August. This report is examining the performance of the entire surface water and foul network within the catchment area and will be issued to the local residents and elected members in the next 6 weeks. It was anticipated that this analysis would be completed prior to the meeting scheduled for 18<sup>th</sup> September, however, the analysis requires a more extensive review of the wider catchment operation on 05<sup>th</sup> August.

### **Next Steps:**

Dublin City Council is examining both interim and permanent measures, which can be implemented to mitigate against such a storm event causing flooding in the future. The City Council has already engaged with Clontarf golf course with a view to retaining additional storm waters within the golf course and eliminating flows via the culvert under the railway or

onto the railway line. Survey work is currently being carried out to ensure that that these measures provide additional capacity and do not result in any unintended consequences. The survey work is due to be completed early next week and the design proposal will then be expedited and implemented as quickly as possible.

The phase 2 works outlined above, which will increase the carrying capacity of the Wad river culvert under the Howth Road and at Clontarf Promenade, are being fast tracked and the team are progressing the relevant design and contractor packages with a programmed completion date of September 2024. The OPW has confirmed their support for these extra flood alleviation measures.

To validate the overall design proposals for the area, Dublin City Council will undertake other surveys, including taking ground and building levels, meetings with Irish Rail, Clontarf Golf club, affected residents, service providers and others. It would be of great assistance to us if any information relating to the flooding including pictures, videos, anecdotal evidence could be emailed to [cqsurfacewater@dublincity.ie](mailto:cqsurfacewater@dublincity.ie) as soon as possible.

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James Nolan  
Executive Manager Engineering

River Wad – Auburn/Castle Court Flooding, Saturday 5<sup>th</sup> August 2023  
Preliminary Assessment of Flooding Mechanism/Flow Routes/Factors involved

