TECHNICAL NOTE

Date:	8th April 2026
To:	Kildare County Council
From:	RPS
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Regarding:	Celbridge Hazelhatch Mobility Corridor (CHMC) – Response to RFI from An Coimisiún Pleanála re the Flood Risk Assessment Conclusion

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FLOOD RISK ASSESSMENT JUSTIFICATION

aCP further information request ACP-323851-25

1. The Flood Risk Assessment sets out that no additional residential dwellings will be introduced into the predicted flood extents for fluvial flood events up to and including the 1-in-1000 year return period as a result of the construction of the proposed scheme with flood mitigation measures. However, the proposed development will result in a reduction in freeboard for a number of properties, therefore increasing the risk of flooding to these properties. Please address showing compliance with the Flood Risk Management guidelines and the Strategic Flood Risk Assessment of the Kildare County Development Plan 2023 to 2029.

We can confirm that no additional dwellings will be introduced into predicted flood extents resulting from the construction of the proposed scheme with flood mitigation measures for fluvial events up to and including the 1-in-1000 year return period. Further, there are four dwellings to the east of the proposed scheme that are currently at risk of flooding in the 1-in-1000 year predicted flood event. All four of these dwellings will see a benefit and have a reduced flood risk following construction of the proposed scheme.

The submitted Stage 3 Flood Risk Assessment (FRA) for the Celbridge-Hazelhatch Mobility Corridor (CHMC) development demonstrates compliance with the KCC CDP 2023–2029 SFRA and the Flood Risk Management Guidelines by applying the Sequential Approach and successfully passing the Justification Test for Development Management.

As the proposed CHMC will provide a critical transport link between Celbridge and Hazelhatch, its alignment cannot avoid flood risk nor be substituted with a less vulnerable use. Therefore, the Justification Test applies.

Requirement 2(i) of the Justification test within the FRM Guidelines states:

"The development proposed will not increase flood risk elsewhere and, if practicable, will reduce overall flood risk."

The Flood Risk Management Guidelines Technical Appendices require that FRAs be proportionate to the scale, nature and location of the development. Accordingly, proportionate mitigation measures are included within the proposed development to appropriately manage flood risk.

Proposed mitigation measures include:

- 15no. floodplain culverts, Ø0.9m and 60m long each;
- 4no. ditches, 1.0m deep (500m total length);
- A downstream ditch along the CHMC alignment with outfalls to the Hazelhatch Rivers and connections for swale drainage outfalls.

Following implementation of these mitigation measures, 18no. properties on the fringe of the floodplain will experience reduced overall flood risk including all four properties to the east of the scheme identified to be within the existing floodplain.

The potential for minimal increase in water level to the southwest of the proposed development is identified within the FRA. This minimal increase is contained within existing greenfield and public realm areas with no impact on existing dwellings.

A reduction in freeboard of 0.01m (10mm) or less is noted within the FRA to 18no. properties located outside of the floodplain for the 1-in-100 year flood event. 15no. of these properties retain freeboard in excess of 500mm in the 1-in-100 year flood event whilst 3no. properties have existing freeboard less than 500mm. All 18no. properties retain freeboard above the 1-in-100 year event with an allowance for climate change (and the 1-in-1000 year event), in compliance with the KCC CDP 2023–2029 SFRA requirements for development in floodplains.

As flood risk at a dwelling is determined by whether water reaches and inundates the vulnerable parts of the property (likelihood × vulnerability), a 0.01m (10mm) increase in water level is not considered to increase flood risk when the property's finished-floor and other vulnerable elements remain a clear margin above that increased level. A 0.01m change is smaller than common measurement/survey uncertainty, natural short-term variations (wind, waves, local turbulence, etc), and spatial variability of water surface on a floodplain. These sources of uncertainty mean a 0.01m change does not meaningfully alter exceedance probabilities to individual properties and therefore does not change either the probability of inundation or the expected consequences, particularly given property floor levels remain with a positive freeboard.

The Site-Specific FRA submitted in support of the CHMC development applies a precautionary approach consistent with the Flood Risk Management Guidelines and implements mitigation and management measures proportionate to the development's risk profile. The assessment demonstrates that flood risk to the proposed development and to surrounding properties is appropriately managed and compliant with the KCC CDP 2023–2029 SFRA and the Flood Risk Management Guidelines.

The Flood Risk Assessment identified that 3no. properties which currently have a freeboard less than 500mm in a 1-in-100 year flood event may experience a 0.01m (10mm) reduction in freeboard as a result of the proposed scheme. These properties are located outside of the current and future floodplain and therefore does not constitute an increase in flood risk.