



OPW Oifig na
nOibreacha Poiblí
Office of Public Works

Flood Map Update

MR106 Deansgrange



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Contents

| | | |
|----------|-----------------------------------|----------|
| 1 | Map Review Programme | 1 |
| 2 | Request Assessment | 2 |
| 2.1 | Map Review Request | 2 |
| 2.2 | Initial assessment | 3 |
| 3 | Map Update | 3 |
| 3.1 | The CFRAM Model | 3 |
| 3.2 | Updates to the Flood Maps | 4 |
| 4 | Conclusion..... | 4 |

1 Map Review Programme

The Map Review Programme is the process that the OPW follows to update predictive flood mapping to continue to provide the best available flood risk information to as wide an audience as possible. The Flood Maps have been developed from detailed engineering analysis and modelling. There is always some uncertainty with regard to the accuracy of predictive flood models; however, the detailed models used have been developed using the best available modelling techniques, tools and data at the time of production.

Updates and revisions to the Flood Maps will be prepared as appropriate. Updates to the Flood Maps are considered when one of the below criteria are met:

- A change in the physical conditions since the Flood Map was produced. Examples of potential changes include new infrastructure, a new development, a culvert or bridge upgrade, land raising, channel realignment, etc.
- An error has been identified in the survey. Errors in the survey may include a channel missing or a channel misaligned, or an error in the surveyed levels used.
- Completion of an OPW-funded Flood Relief Scheme or Minor Works Scheme.
- Evidence presented by a recent flood event that calls into question the published Flood Map.
- The completion of a Strategic Flood Risk Assessment, supported by hydraulic modelling, which produces flood maps that are materially different to the OPW published Flood Map.

The Flood Map Review Programme covers Flood Maps produced by the National Catchment Flood Risk Assessment and Management Programme (CFRAM) and other projects that produce detailed productive flood mapping as published on www.floodinfo.ie. The CFRAM Programme was the principle vehicle to deliver on Ireland's commitments under the EU Floods Directive (2007/60/EC). The EU Floods Directive also requires that the Member States review and if necessary update the flood maps on a six-yearly cycle; the Map Review Programme is the process that satisfies this requirement.

The review of indicative national mapping datasets such as the outputs of the National Indicative Fluvial Mapping study and the National Coastal Flood Hazard Mapping are not considered as part of the Map Review Programme.

2 Request Assessment

2.1 Map Review Request

Flood Maps were produced for the Deansgrange Stream as part of the Eastern CFRAM study under the National CFRAM programme. The Flood Maps for this location were finalised in 2017.

A Flood Map Review Request was received by the OPW which indicated a potential anomaly in the flood mapping regarding the modelled river centreline of the Deansgrange Stream. As shown in Figure 1, the Deansgrange Stream modelled river centreline shown on the CFRAM flood map is not matching the actual alignment of the river channel in the area of Little Meadow.

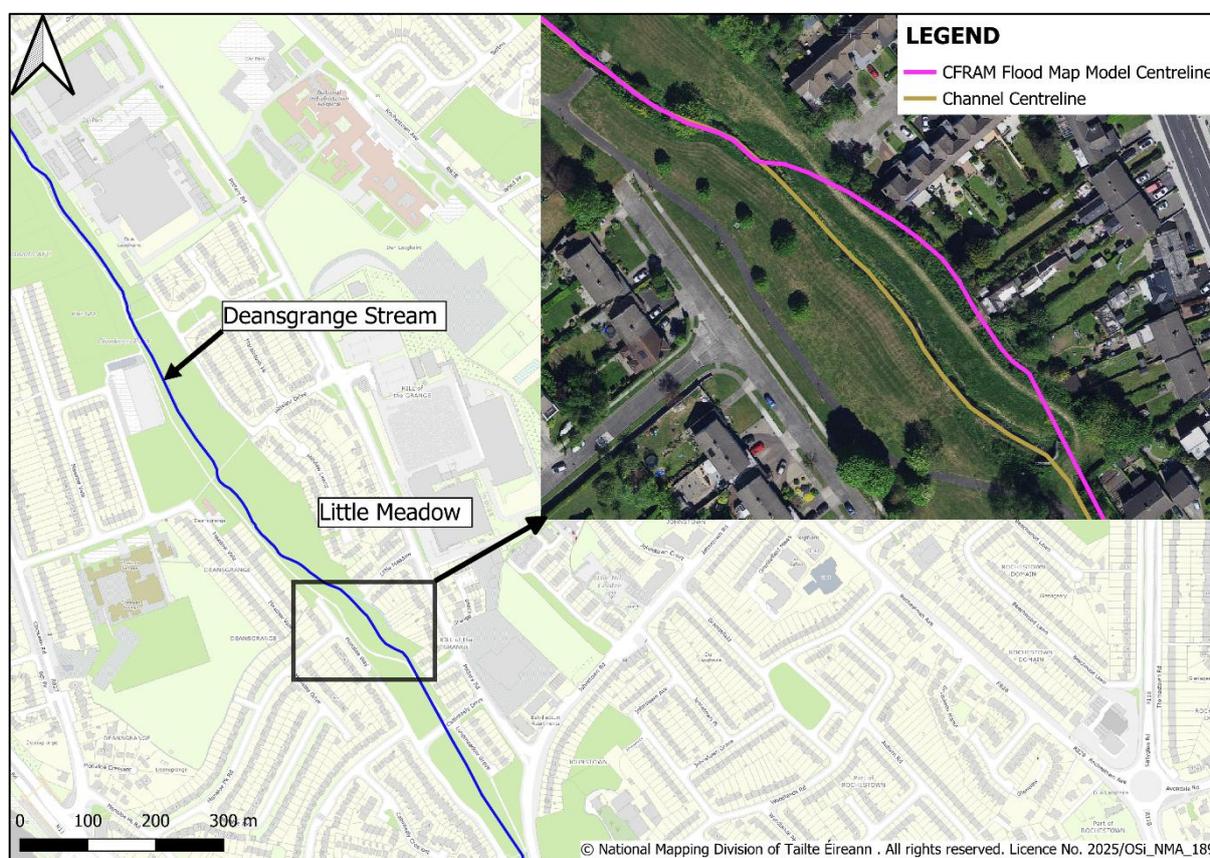


Figure 1: The CFRAM modelled river centerline (magenta) and the actual watercourse alignment (green) near Little Meadow

The Flood Map Review Request also queried a label displayed on the CFRAM flood depth maps suggesting the flood alleviation works at Little Meadow, Deansgrange have not been represented in the model yet. See Figure 2 below.

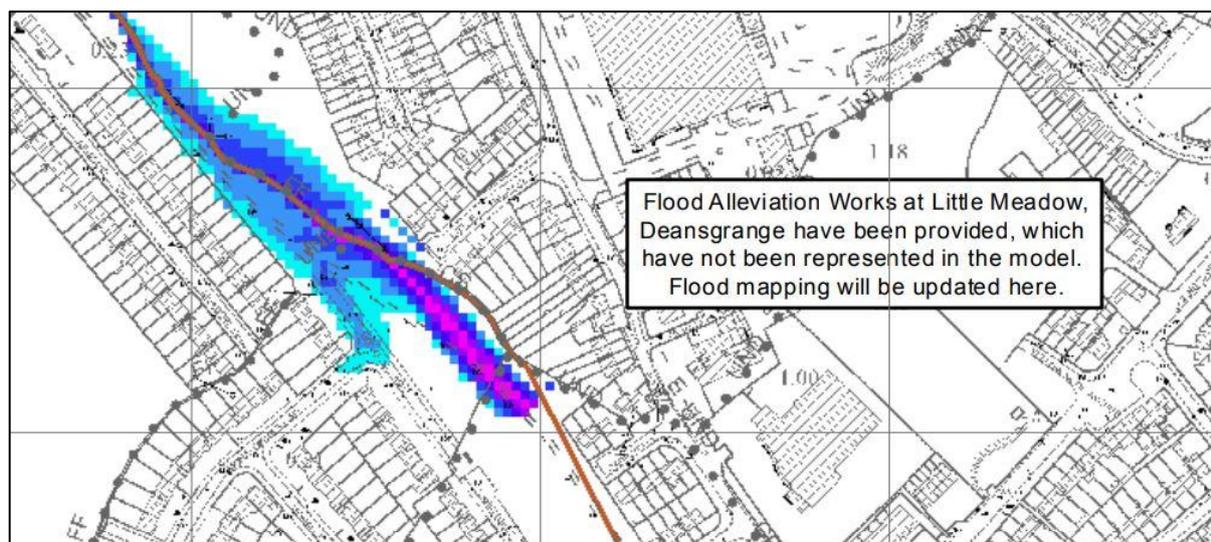


Figure 2: Label shown on CFRAM Depth Maps E10LOU_DPFCD001_F1_08

2.2 Initial assessment

An initial assessment was carried out of the items raised in the request.

It was confirmed that flood alleviation works were carried out at Little Meadow and completed in 2015. The flood alleviation works included stream re-alignment, embankments on the left bank, tree removal, and an upgrade to the culvert inlet to increase conveyance.

It was determined that the modelled river centerline for the Deansgrange Stream near Little Meadow in the final CFRAM flood maps was the incorrect version. It was also determined that the flood alleviation works were incorporated into the final CFRAM hydraulic model and therefore the label shown in Figure 2 was not necessary.

The OPW will only carry out a Map Update when information provided supports one of the criteria described in Section 1. The inaccurate representation of the modelled river centerline and the displayed label satisfy the criteria for a survey data error. An update of the Flood Maps is warranted in this case.

3 Map Update

3.1 The CFRAM Model

Following comments received during the public consultation period in 2015, it was noted that alterations were required to the hydraulic model. Updates carried out to the hydraulic model encompassed the inclusion of flood alleviation works at Little Meadow. This is detailed in Section 4.7.5.2 of the Eastern CFRAM Study UoM10 Hydraulic Report available on Floodinfo.ie.

Figure 4.7.53 in the Eastern CFRAM Study UoM10 Hydraulic Report shows the comparison of the draft flood extents which excluded the flood alleviation works and the final flood extents which accounted for the flood alleviation works at Little Meadow. See Figure 3.

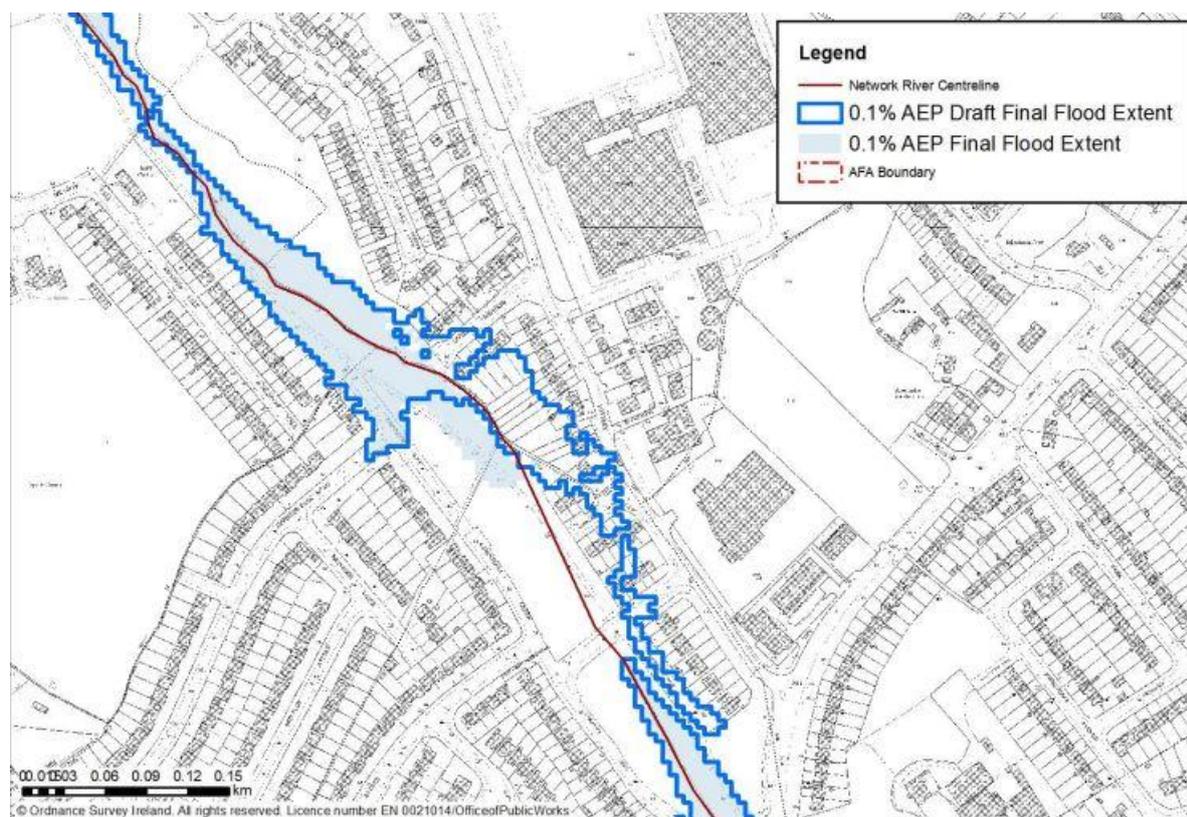


Figure 3: Comparison of the draft and final flood extents as shown in Figure 4.7.53 of CFRAM Hydraulic Report

3.2 Updates to the Flood Maps

The flood alleviation works at Little Meadow were included in the final CFRAM hydraulic model and Flood Maps. Therefore, the modelled river centerline was amended on the Flood Maps to follow the actual channel alignment, as shown in Figure 1. The label displayed on the flood depth maps, as shown in Figure 2, was removed as it was not necessary.

4 Conclusion

The Flood Maps were updated to correct the modelled river centreline which now reflects the actual alignment of the Deansgrange Stream. A label on the flood depth maps, which incorrectly claimed flood alleviation works were not represented in the model, was also removed. The updated Flood Maps can be viewed on www.floodinfo.ie.