

APPENDIX E

Dunlavin Flood Risk Assessment

To comply with the EU Floods Directive introduced in November 2007 and in line with the guidelines for Planning Authorities '*The Planning System and Flood Risk Management*', an assessment of flood risks has been formally taken into account in the preparation of this plan.

'Section 12.6 Flooding' of the County Development Plan sets out objectives for the management of flood risk. Objective FL2 states 'Land will not be zoned for development in an area identified as being at high or moderate flood risk (as set out in the guidelines), unless where it is fully justified (through the Justification Test set out in the guidelines) that there are wider sustainability grounds for appropriate development and unless the flood risk can be managed to an acceptable level without increasing flood risk elsewhere and where possible, reduce flood risk overall'.

This Flood Risk Assessment for the designation of lands is prepared in accordance with this objective.

In this plan, the approach is to avoid development in areas at risk of flooding, and where development in floodplains cannot be avoided, to take a sequential approach to flood risk management based on avoidance, reduction and mitigation of risk.

The information about flood risks that has been used in the preparation of this plan has been collated from a number of sources including:

- 'Floodmaps.ie' – The national flood hazard mapping website operated by the Office of Public Works, where information about past flood events is recorded and made available to the public. 'Flood point' information is available on this site and has been noted.
- Alluvial deposits maps of the Geological Survey of Ireland – indicating areas that have flooded in the past (the source of alluvium)
- Examination of the old '6 Inch' maps
- Walk over survey to assess potential sources of flooding
- Consultation with the engineering section of Wicklow County Council
- An examination of contours
- Aerial photographs

Dunlavin is located in the South Eastern CFRAM¹ study area. Details of this study are set out at the end of the document. The preliminary flood risk assessment that was completed in 2011 for the CFRAM did not identify Dunlavin as an area that needed further assessment to determine risk of flooding.

The information from the above sources has been amalgamated into a single map, attached to this report. On this basis of this data, the guidelines require that 'flood zones' be identified i.e. geographical areas within which the likelihood of flooding is in a particular range.

There are three types or levels of flood zones defined for the purposes of the guidelines and this assessment:

Flood Zone A: Where the probability of flooding from rivers and the sea is highest (greater than 1% or 1 in 100 for river flooding or 0.5% or 1 in 200 for coastal flooding);

Flood Zone B: Where the probability of flooding from rivers and the sea is moderate (between 0.1% or 1 in 1000 and 1% or 1 in 100 for river flooding and between 0.1% or 1 in 1000 year and 0.5% or 1 in 200 for coastal flooding);

¹ Catchment Flood Risk Assessment and Management. The national CFRAM programme commenced in Ireland in 2011 under the aegis of the OPW in consultation with Local Authorities

Flood Zone C: Where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding). Flood Zone C covers all areas of the plan which are not in zones A or B.

After considering the data, the entire plan area is deemed to be located in **Flood Zone C**.

While the River Greese traverses lands on the extremity of the plan boundary, due to the topography of the area and existence of the disused railway line (either in mound or cutting) that extends along the western boundary of the plan area, flooding from the River Greese is unlikely to occur on lands within the plan boundary.

While there are a number of small streams and drainage channels traversing the plan area and areas proposed for zoning, no evidence of flooding from these watercourses has been determined. Through the implementation of the objectives of the CDP (set out to follow) no development shall be allowed to occur that would add volume of surface water to these channel that cannot be supported. In particular, SUDS and attenuation measures would be required on any site before discharge of surface waters to such watercourses would be facilitated.

This assessment is supported by the fact that neither the OPW databases nor the findings of the internal consultations indicated any evidence of flooding (historical or physical) on the lands within the plan boundary.

Therefore no further assessment of the proposed zonings or objectives of this plan are required and no specific flood mitigation objectives are necessitated.

Notwithstanding this finding, all applications for permission shall still be subject to the flood control objectives of the County Development Plan as follows:

- FL1** To prepare flood zone maps for all zoned lands within the County as part of future Local Area Plans.
- FL2** Land will not be zoned for development in an area identified as being at high or moderate flood risk (as set out in the Guidelines), unless where it is fully justified (through the Justification Test set out in the Guidelines) that there are wider sustainability grounds for appropriate development and unless the flood risk can be managed to an acceptable level without increasing flood risk elsewhere and where possible, reducing flood risk overall.
- FL3** Applications for significant new developments or developments in high or moderate flood risk areas shall follow the sequential approach as set out above.
- FL4** To prohibit development in river flood plains or other areas known to provide natural attenuation for floodwaters except where the development can clearly be justified with the guidelines 'Justification Test'.
- FL5** To limit or break up large areas of hard surfacing in new developments and to require all surface car parks to integrate permeability measures such as permeable paving.
- FL6** Excessive hard surfacing shall not be permitted for new, or extensions to, residential or commercial developments and all applications will be required to show that sustainable drainage techniques have been employed in the design of the development.

- FL7** To require all new developments to include proposals to deal with rain and surface water collected on site and where deemed necessary, to integrate attenuation and SUDS measures.
- FL8** Flood assessments will be required with all planning applications proposed in flood risk areas to ensure that the development itself is not at risk of flooding and the development does not increase the flood risk in the relevant catchment (both up and down stream of the application site). Generally a Flood Impact Assessment will be required with all significant developments and a certificate (from a competent person stating that the development will not contribute to flooding within the relevant catchment) will be required with all small developments of areas of 1 hectare or less.
- FL9** For developments adjacent to all watercourses of a significant conveyance capacity or where it is necessary to maintain the ecological or environmental quality of the watercourse, any structures (including hard landscaping) must be set back from the edge of the watercourse to allow access for channel clearing/ maintenance/ vegetation. A minimum setback of up to 10-15m will be required either side depending on the width of the watercourse.

Note: South Eastern CFRAM Study

The South Eastern Catchment Flood Risk Assessment and Management (CFRAM) study commenced in the South Eastern district in August 2011 and will run until the end of 2016.

The South Eastern district is one of Ireland's largest river basin districts covering about one fifth of the country with an area of nearly 13,000km². Approximately half a million people live in the district and this population has been steadily growing owing to the spread of Dublin's commuter belt. The largest urban area is Waterford city but there are several large towns. Nevertheless, 80% of the district's population lives in small villages or one-off houses in rural areas. The rich soils of the south east are particularly suitable for agriculture and approximately half of the land area is given over to tillage and grassland. The district's waters support fishing and boating activities and the coastlines of Wexford and Waterford are popular holiday resorts.



Why is the study being carried out? Floods pose a risk to human life and wellbeing, often cause extensive damage to property and can have severe environmental consequences. The EU Floods Directive (2007/60/EC) is the driving force behind flood management throughout Europe and requires a catchment-based approach to assessing and managing flood risks. The South Eastern CFRAM study has been commissioned in order to meet the requirements of the Floods Directive, as well as to deliver on core components of the 2004 National Flood Policy, in the South Eastern district.

What are the aims of the study? The main aims of the South Eastern CFRAM Study are to:

- assess flood risk, through the identification of flood hazard areas and the associated impacts of flooding;
- identify viable structural and non-structural measures and options for managing the flood risks for localised high-risk areas and within the catchment as a whole;

- prepare a strategic Flood Risk Management Plan (FRMP) and associated Strategic Environmental Assessment (SEA) that sets out the measures and policies that should be pursued to achieve the most cost effective and sustainable management of flood risk;
- ensure that full and thorough public and stakeholder consultation and engagement is achieved.






How will the study aims be achieved? A preliminary flood risk assessment was completed in 2011 to identify areas that need further assessment to determine their risk of flooding. For these risk areas, flood risk maps and flood hazard maps will be drawn up by mid 2014. Flood Risk Management Plans (FRMPs) will be developed by 2016. FRMPs will include measures in relation to flood prevention, protection and preparedness. Emergency response to flooding, recovery from flooding and incorporating lessons learned will be important elements of the FRMPs. Issues such as climate change, land use practices and future development will also be addressed in the FRMPs. The public will have a right to access the CFRAM programme information and to have their say in the development of FRMPs.

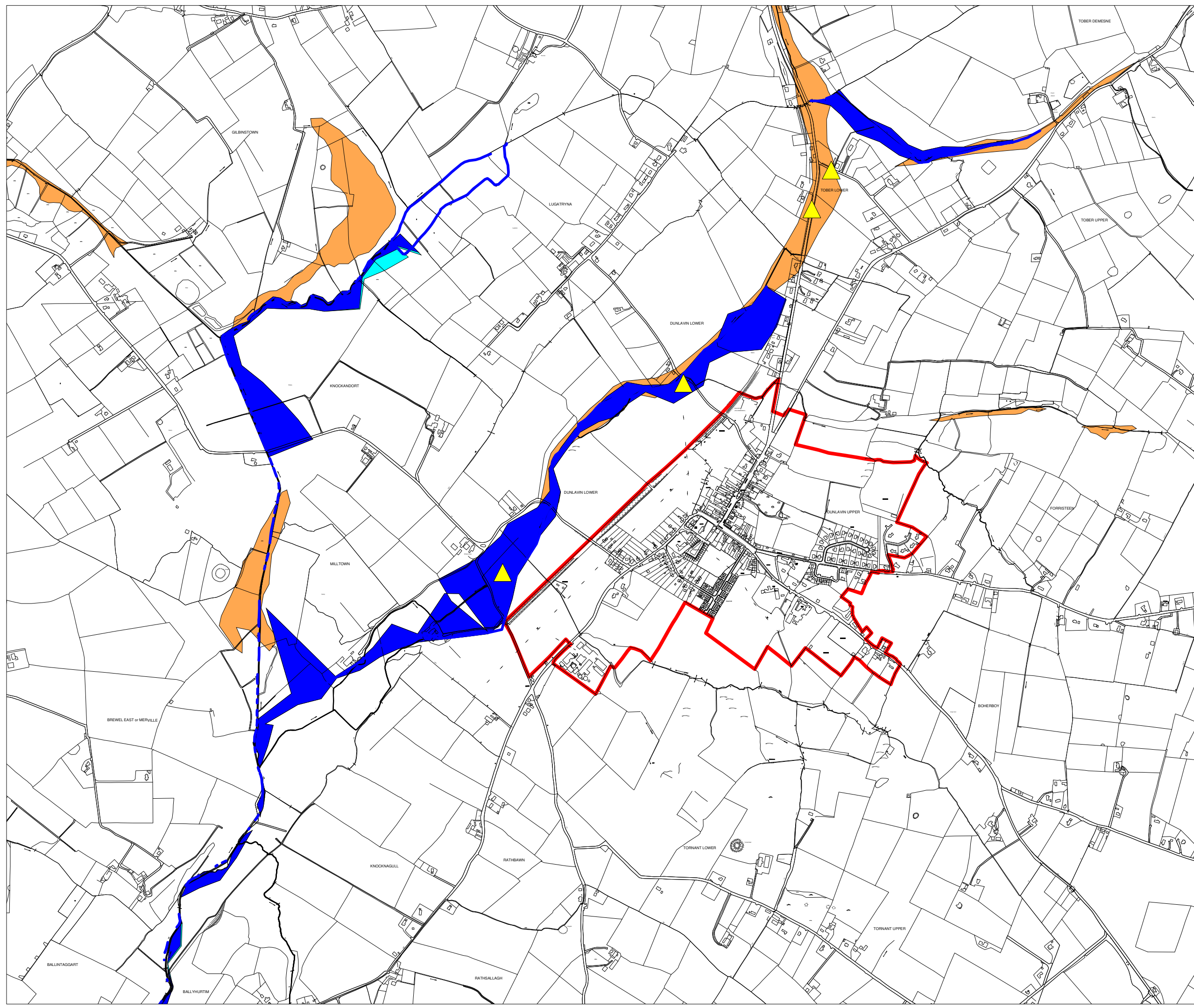
DUNLAVIN TOWN PLAN

DRAFT

FLOOD MAP

LEGEND

-  1:100 Flood Risk Area
-  1:1000 Flood Risk Area
-  Alluvial Soils
-  OPW - Flood Events
-  Plan Boundary



Director of Services:	Desmond O' Brien
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Wicklow County Council Planning Department
County Buildings, Station Road, Wicklow
Tel: (0404) 20100 Email: plandev@wicklowcoco.ie