APPENDIX 10

APPENDIX 10-1

1 CHARACTERISING CLIMATE HAZARDS

1.1 Frequency of Climate Hazards according to Annex B [1]

Table 1-1: Classifying the frequency of climate hazards

Frequency	Frequency Occurrence in a Year	Description
Very Frequent	>100%	Occurs several times in a single year
Frequent	50 to 100%	Occurs once in a 1-to-2-year period
Common	10 to 50%	Occurs once in a 2-to-10-year period
Occasional	1 to 10%	Occurs once in a 10–100-year period
Rare	<1%	occurs once in over 100 years

1.2 Vulnerability Types

Table 1-2: Description of different vulnerability types [1]

Vulnerability Type	Frequency Occurrence in a Year
Physical Vulnerability	Properties of an asset related to the structure or facilities can exacerbate/reduce the impacts before, during, or after a hazard event e.g. poor design and the construction of the building, provision of active cooling. **or;** Ability of a population/persons to access equipment or resources that can exacerbate/reduce the impacts before, during, or after a hazard event.

1.3 Level of Impacts

Table 1-3:Description of level of impacts [1]

Impact	Description	Level of Impact
Catastrophic	Widespread service failure with services unable to cope with wide-scale impacts	5
Major	Services seen to be in danger of failing completely with severe/widespread decline in service provision	4
Moderate	Service provision under severe pressure. Appreciable decline in	3

Impact	Description	Level of Impact
	service provision at a community level	
Minor	Isolated but noticeable examples of service declines	2
Negligible	Appearance or threat but no actual impact on service provision	1

1.4 Magnitude of Impact for Asset Damage Category

Table 1-4: Magnitude of impact relating to Asset Damage [1]

Risk Area	Negligible	Minor	Moderate	Major	Catastrophic
Asset Damage	Impact can be absorbed through normal activity	An adverse event that can be absorbed by taking business continuity action	A serious event that requires additional emergency business continuity	A critical event that requires extraordinary/emergency business continuous actions	Disaster with the potential to lead to shutdown or collapse or loss of assets network

2 IDENTIFICATION OF CLIMATE HAZARDS

2.1 Kilkenny County Council Climate Change Adaption Strategy

The Kilkenny County Council Climate Change Adaption Strategy has evaluated the risks due to climate change using the following scale (Table 2-1 below) [2] The Risk is measured as a product of the Consequence and Likelihood of hazards.

Table 2-1:Kilkenny County Council Risk Scale

Consequence Description	Consequence Score	Likelihood Description	Likelihood Score
Critical	5	Almost Certain	5
Major	4	Likely	4
Moderate	3	Possible	3
Minor	2	Unlikely	2
Negligible	1	Rare	1

2.2 ThinkHazard

ThinkHazard is a web-based tool enabling non-specialists to consider the impacts of disasters on new development projects, commissioned by the Global Facility for Disaster Reduction and Recovery [3]. Hazards are provided at a local administrative resolution and are based on the following scale (Table 2-2).

Table 2-2: ThinkHazard Scale

Scale	Description
High	Users should be highly aware of potential severe damage from this hazard for the project location. Without taking measures to mitigate the hazard and risk, high levels of damage can be expected to occur within the project or human lifetime
Medium	Users should be aware of the potentially damaging effects of this hazard on the project location. Potentially damaging events can be expected to occur within the project or human lifetime and measures to mitigate the hazard and risk should be considered.
Low	Potentially damaging events are less likely to occur within the project or human lifetime but are still possible. Measures to mitigate the hazard and risk would be prudent at critical locations.
Very Low	Available data suggests that potentially damaging effects are unlikely to occur, on average, in the project or human lifetime.

2.3 Climate Change Adapt (European Commission)

The Climate -ADAPT platform is maintained by the European Commission and the European Environment Agency. Climate -ADAPT aims to support Europe in adapting to climate change, helping users to access and share data. The platform includes a database that contains quality-checked information and country-level reports [4].

At the time of writing, the Climate ADAPT platform does not provide a quantitative assessment of the level of risks associated with the potential hazards to a country.

2.4 Climate Hazards Associated with the Proposed Development

Table 2-3 below highlights the hazards identified through desk-based research.

Table 2-3:Hazards identified as relevant from available resources

Source	Hazards Identified	Category of Risk (if applicable)
Kilkenny County Council Climate Action Plan [2]	• Heatwaves; • Cold weather; • Dry Spells; • Wind speeds; • Flooding; • Extreme Rainfall	• Major; • Minor; • Moderate; • Major; • Critical
ThinkHazard [3]	• Wildfire; • River Flood; • Urban Flood; and; • Extreme Heat.	• Medium; • Low • Low; • Low
Climate-ADAPT [4]	• Temperature (extreme highs and lows, wildfires); • Winds (Storms); • Water (Drought, Floods, Extreme Rainfall; and, • Solid Mass.	**Not Identifiable**

3 REFERENCES

[1] GOI, "Technical Annex B Climate Change Risk Assessment," Government of Ireland , Dublin, 2023.

[2] KCC, "Kilkenny County Council, Climate Change Adaption Strategy 2019-2024," Kilkenny County Council, Kilkenny, 2019.

[3] GFDRR, "Think Hazard," Global Facility for Disaster Reduction and Recovery, 30 June 2020. [Online]. Available: https://thinkhazard.org/en/about. [Accessed 16 February 2023].

[4] EC, "Climate Adapt," European Commission, 2023. [Online]. Available: https://climate-adapt.eea.europa.eu/#t-countries. [Accessed 16 08 2023].

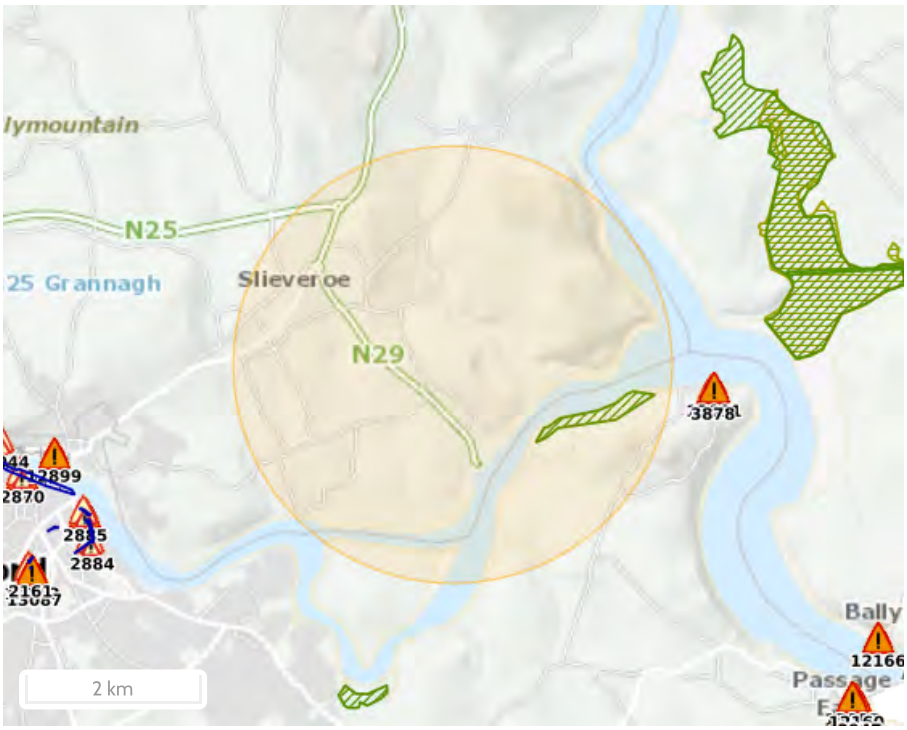
APPENDIX 10-2

Past Flood Event Local Area Summary Report

OPW Oifig na nOibreacha Poiblí Office of Public Works

Report Produced: **25/1/2024 14:43**

This Past Flood Event Summary Report summarises all past flood events within 2.5 kilometres of the map centre.



Map Legend

- Single Flood Event
- Recurring Flood Event
- Past Flood Event Extents
- Drainage Districts Benefited Lands*
- Land Commission Benefited Lands*
- Arterial Drainage Schemes Benefited Lands*

* Important: These maps do not indicate flood hazard or flood extent. Their purpose and scope is explained on Floodinfo.ie

0 Results

Name (Flood_ID)	Start Date	Event Location