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FLOOD RISK ASSESSMENT, PROPOSED 220 kV SUBSTATION AND UNDERGROUND CABLE ROUTES

Technical Report Prepared For

Huntstown Power Company

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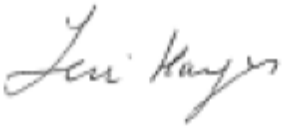
Signature		
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1.0 INTRODUCTION

AWN Consulting Limited (AWN) has prepared this Flood Risk Assessment for the proposed strategic infrastructure development at this site of c.4.33 ha on lands adjacent to Huntstown Power Station, North Road, Finglas, Dublin 11. The site is bounded to the north and east by agricultural fields, to the south by the private road connecting the North Road with Huntstown Power Station and Huntstown Quarry and to the west by Huntstown Power Station.

The proposed development will consist of the following:

(1) Construction of a 2 storey 220 kV Gas Insulated Switchgear (GIS) substation known as 'Mooretown' comprising switchgear floor, cable pit/entry room, generator room, relay room, battery room, workshop, toilet, store room, mess room, hoist space, stair cores and circulation areas (c.2,068 sqm total gross floor area) with an overall height of c.17m located within an overall EirGrid and Customer compound (c.11,231 sqm in area). Lightning electrodes are attached to the roof of the substation building resulting in an overall height of c.20m. The compound includes 4 no. 220/20 kV transformers, 4 no. 20 kV switchgear buildings and 1 no. 20 kV control room buildings (c.5 m high and c. 35.5 sqm in area each), 220 kV series coil (equipment), fire walls (ranging from c.10 m-12.5 m high), lightning finials and monopoles (c.20 m high). The overall compound is surrounded by a c.2.6 m high palisade fence. The proposed substation will serve the data centre proposed under concurrent application Reg. Ref. FW21A/0151;

(2) The underground cable (Cable No. 1) will follow a route originating at the proposed Mooretown Substation extending south and then west along the private road connecting the North Road with Huntstown Power Station and Huntstown Quarry. The route terminates at a proposed joint bay on the existing Corduff cable route. The underground cable (Cable No. 2) will follow a route originating at the proposed Mooretown Substation Compound / series coil extending south across the internal road connecting the North Road with Huntstown Power Station and Huntstown Quarry. The route terminates at a proposed joint bay on the existing Finglas cable route. Removal of the redundant sections of the 220 kV Corduff cables and 220 kV Finglas cables serving the existing AIS bay to Huntstown Power Station. The underground cable (Cable No. 3) will follow a route originating at the Mooretown GIS Substation extending south and then west to the adjacent existing ESB Huntstown A AIS station. The route terminates in the ESB Huntstown A AIS Station. The underground cable (Cable No. 4) will follow a route originating at the Mooretown GIS Substation extending south and then west to the adjacent existing Huntstown B AIS station. The route terminates in the ESB Huntstown B AIS Station;

(3) The development includes all associated and ancillary site development and construction works, services provision, drainage works, connections to the substations, all internal road/footpath access routes, landscaping and boundary treatment works, vehicular access onto the private road to the south of the site and provision of 9 no. car parking spaces in the overall compound.Planning Context and Guidance

The following planning policy documents are relevant to the assessment of the proposed development:

- The National Planning Guidelines published by the OPW and the Department of the Environment, Heritage and Local Government in November 2009 entitled 'The Planning System and Flood Risk Management Guidelines for Planning Authorities'
- Fingal Development Plan 2017-2023
- National Development Plan 2018-2027

1.1 The Planning System and Flood Risk Management Guidelines

This assessment is undertaken in accordance the Department of the Environment, Heritage and Local Government (DoEHLG) and the Planning System and Flood Risk Management Guidelines for Planning Authorities published by the OPW in 2009 (hereafter referred to as the FRM Guidelines[1]) in order to introduce comprehensive mechanisms for the incorporation of flood risk identification, assessment and management into the planning process.

For carrying out a Site-specific Flood Risk Assessment (SSFRA), the OPW Guidelines recommend using Source-Path-Receptor (S-P-R) concept model to identify where the flood originates from, what is the floodwaters path and the areas in which assets and people might be affected by such flooding (section 2.18 of the OPW Guidelines, 2009). Figure 1.1 below shows a schematic representation of S-P-R model.

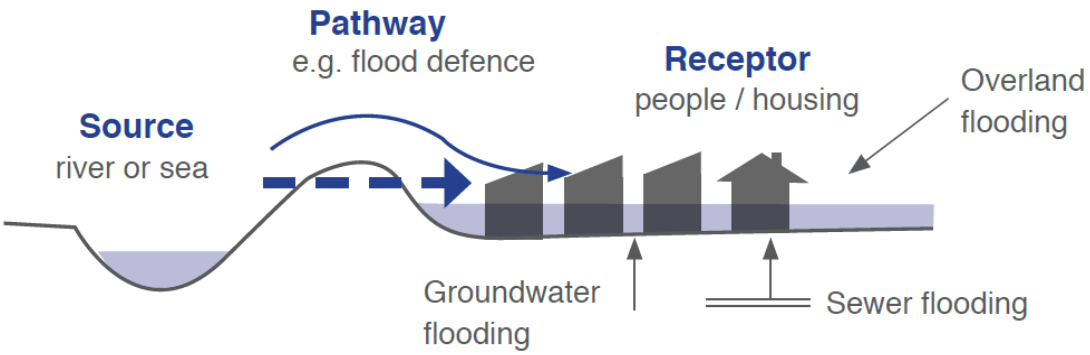

Figure 1.1 *Source-Pathway-Receptor Model (OPW, 2019)*

A Flood Risk Assessment (FRA) is undertaken over several stages with the need for progression to a more detailed stage dependent on the outcomes of the former stage.

This hierarchy of assessment is necessary to ensure that flood risk is considered at all levels of the planning process and that the appropriate level of detail is also considered, avoiding the need for detailed and costly assessments prior to making strategic decisions.

In terms of the Flood Risk Assessment and Management Study the scope of works incorporates three stages:

- ***Stage 1: Flood Risk Identification -*** to identify whether there may be any flooding or surface water management issues related to a plan area or proposed development site that may warrant further investigation.
- ***Stage 2: Initial Flood Risk Assessment -*** to confirm sources of flooding that may affect a plan area or proposed development site, to appraise the adequacy of existing information and to determine what surveys and modelling approach is appropriate to match the spatial resolution required and complexity of the flood risk issues. The extent of the risk of flooding should be assessed which may involve preparing indicative flood zone maps. Where existing river or coastal models exist, these should be used broadly to assess the extent of the risk of flooding and potential impact of a development on flooding elsewhere and of the scope of possible mitigation measures; and
- ***Stage 3: Detailed Flood Risk Assessment -*** to assess flood risk issues in sufficient detail and to provide a quantitative appraisal of potential flood risk to a proposed or existing development, of its potential impact on flood risk elsewhere and of the effectiveness of any proposed mitigation measures. This

will typically involve use of an existing or construction of a hydraulic model of the river or coastal cell across a wide enough area to appreciate the catchment wide impacts and hydrological processes involved.

As described in the FRM guidelines flood risk is a combination of the likelihood of flooding occurring and the potential consequences which may arise, and is normally expressed in terms of the following relationship:

Flood risk = Probability of flooding x Consequences of flooding

Likelihood of flooding is normally expressed as the percentage probability based on the average frequency measured or extrapolated from records over a large number of years. A 1% probability indicates the flood level that is expected to be reached on average once in 100 years, i.e. it has a 1% chance of occurring in any one year. Therefore:

- 100 year flood = 1% Annual Exceedance Probability (AEP);
- 1000 year flood = 0.1% AEP.

In the FRM Guidelines, the likelihood of a flood occurring is established through the identification of Flood Zones which indicate a high, moderate or low risk of flooding from fluvial or tidal sources, as defined as follows:

Flood Zone A - Where the probability of flooding is highest (greater than 1% AEP or 1 in 100 for river flooding and 0.5% AEP or 1 in 200 for coastal flooding) and where a wide range of receptors would be vulnerable;

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

Flood Zone C - Where the probability of flooding is low (less than 0.1% AEP or 1 in 1000 year for both river and coastal flooding).

Figure 1.2 *Indicative Flood Zone Map (OPW, 2009)*

According to the OPW Guidelines, the planning implication of each of the zones mentioned above are:

Zone A - High probability of flooding. Most types of development would be considered inappropriate in this zone.

Zone B - Moderate probability of flooding. Highly vulnerable development, such as hospitals, residential care homes, Garda, fire and ambulance stations, dwelling houses and primary strategic transport and utilities infrastructure, would generally be considered inappropriate in this zone

Zone C - Low probability of flooding. Development in this zone is appropriate from a flood risk perspective (subject to assessment of flood hazard from sources other than rivers and the coast) but would need to meet the normal range of other proper planning and sustainable development considerations.

A sequential approach was undertaken for this risk assessment under guidance from the local planning authorities (2009). Specifically, a sequential approach is first and foremost directed towards land that is at low risk of flooding. The underpinning philosophy of the sequential approach is highlighted in the illustration below. Based on the *DRAFT* PRFA (Preliminary Flood Risk Assessment) and FCC Development Plan 2017-2023 Strategic Flood Risk Assessment maps, the proposed development cable routes reside in Flood Zone C. This report contains the first stage of the flood risk assessment.

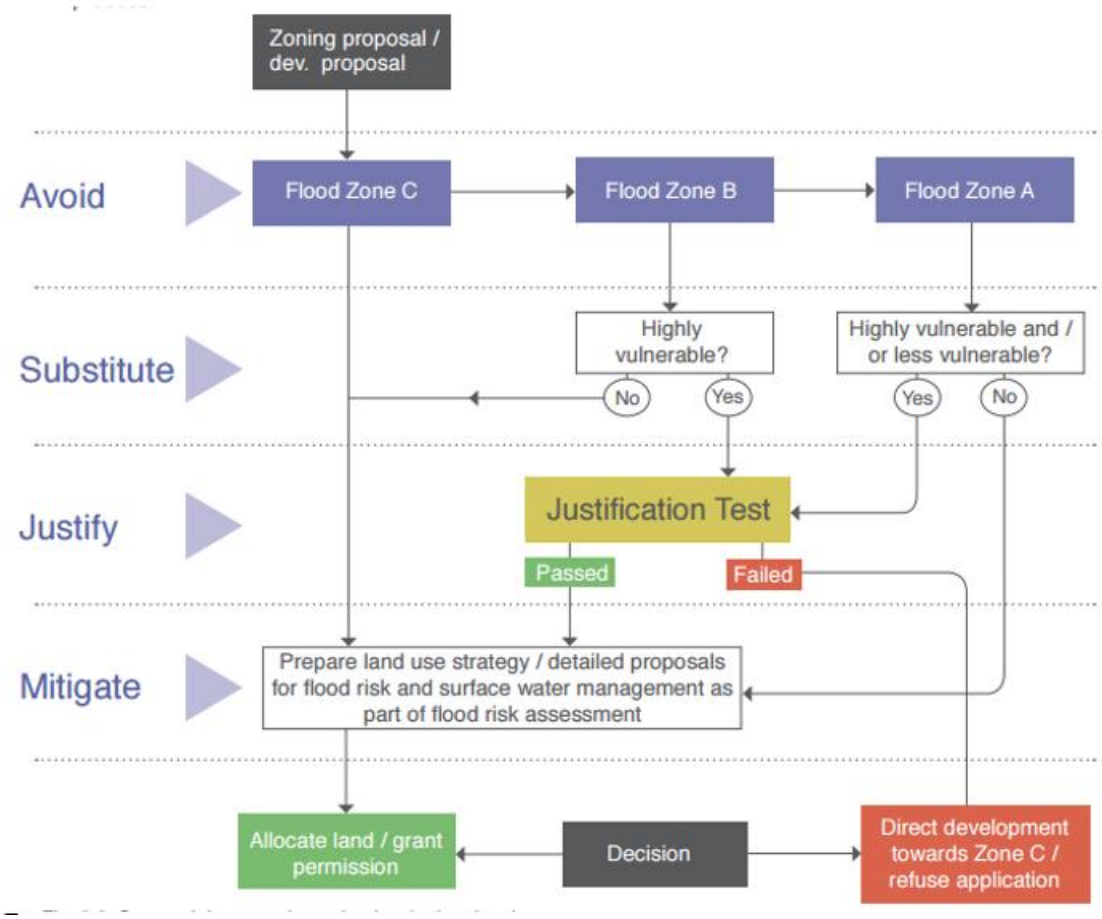

Figure 1.3 Sequential approach mechanism in the planning process

1.2 Methodology

This assessment follows the FRM Guidelines for a Stage 1 Assessment. The methodology involves researching the following data sources:

- Base maps – Ordnance Survey of Ireland[2]
- Flood Hazard Maps and flooding information for Ireland, www.floodmaps.ie Office of Public Works (OPW)[3]
- Geological Survey of Ireland (GSI) maps on superficial deposits[4]
- EPA hydrology maps[5]
- National River Basin Management Plan 2018-2021[6]
- The National Development Plan 2018 – 2027[7]
- Fingal County Development Plan 2017-2023[9]
- The Planning System and Flood Risk Management guidelines for the planning authorities[1]
- Strategic Flood Risk Assessment for Fingal County Council Development Plan 2017-2023[10]

The proposed development and its component parts have been assessed against the FRM Guidelines Classification of Vulnerability. It is considered that the proposed development, for underground electrical transmission lines is utilities distribution, and is claeed as 'Highly Vulnerable Development (including essential infrastructure'(see Insert 1.1 below).

According to the FRM Guidance Highly Vulnerable Development requires a Justification test for Flood Zone A and B, and is appropriate for Flood Zone C (see Insert 1.2 below).

Vulnerability class	Land uses and types of development which include*:
Highly vulnerable development (including essential infrastructure)	Garda, ambulance and fire stations and command centres required to be operational during flooding; Hospitals; Emergency access and egress points; Schools; Dwelling houses, student halls of residence and hostels; Residential institutions such as residential care homes, children's homes and social services homes; Caravans and mobile home parks; Dwelling houses designed, constructed or adapted for the elderly or, other people with impaired mobility; and Essential infrastructure, such as primary transport and utilities distribution, including electricity generating power stations and sub-stations, water and sewage treatment, and potential significant sources of pollution (SEVESO sites, IPPC sites, etc.) in the event of flooding.
Less vulnerable development	Buildings used for: retail, leisure, warehousing, commercial, industrial and non-residential institutions; Land and buildings used for holiday or short-let caravans and camping, subject to specific warning and evacuation plans; Land and buildings used for agriculture and forestry; Waste treatment (except landfill and hazardous waste); Mineral working and processing; and Local transport infrastructure.
Water-compatible development	Flood control infrastructure; Docks, marinas and wharves; Navigation facilities; Ship building, repairing and dismantling, dockside fish processing and refrigeration and compatible activities requiring a waterside location; Water-based recreation and tourism (excluding sleeping accommodation); Lifeguard and coastguard stations; Amenity open space, outdoor sports and recreation and essential facilities such as changing rooms; and Essential ancillary sleeping or residential accommodation for staff required by uses in this category (subject to a specific warning and evacuation plan).
*Uses not listed here should be considered on their own merits	

Insert 1.1 *Classification of vulnerability of different types of developments.*

	Flood Zone A	Flood Zone B	Flood Zone C
Highly vulnerable development (including essential infrastructure)	Justification Test	Justification Test	Appropriate
Less vulnerable development	Justification Test	Appropriate	Appropriate
Water-compatible development	Appropriate	Appropriate	Appropriate

Insert 1.2 *Matrix of vulnerability versus flood zone to illustrate appropriate development that required to meet Justification test*

2.0 EXISTING ENVIRONMENTAL SETTING AND HYDROLOGICAL ENVIRONMENT

2.1 Hydrology

According to the EPA maps, the majority of the proposed development site lies within the Liffey and Dublin Bay Catchment (Hydrometric Area 09) and the Tolka River sub-catchment. While the northern boundary crosses over into the Nanny-Delvin catchment (Hydrometric Area 08) and the Broadmeadow sub-catchment (WFD name: Broadmeadow_SC_010, Id 08_3). The current EPA watercourse mapping does not include any existing streams within the subject site boundaries, a review of the historical mapping records provided within the GeoHive website do not indicate any watercourses within the site.

The local drainage network comprises a series of shallow ditches running along the field boundaries which consist of a series of local manmade drainage, with intermittent or ephemeral characteristics and likely fed from surface runoff. The local drainage ultimately flows in a northerly direction towards the Huntstown Stream (located c. 850 m to the north of the site, refer to Figure 2.1 below).

The Huntstown Stream joins the Ward River c. 5 km to the northeast of the site (at Saint Margaret Golf and Country Club). The Ward River flows towards Malahide Estuary, a Natura Site (SPA/SAC/pNHA) located c. 10 km to the northeast of the site after joining the Broadmeadow River.

Figure 2.1 Local area with hydrological environment

According to the EPA maps, the majority of the proposed development site lies within the Liffey and Dublin Bay Catchment (Hydrometric Area 09) and the Tolka River sub-catchment. While the northern boundary crosses over into the Nanny-Delvin catchment (Hydrometric Area 08) and the Broadmeadow sub-catchment (WFD name: Broadmeadow_SC_010, Id 08_3).

However, the local drainage aforementioned suggests that the subject site actually belongs to the Nanny Delvin Catchment (Hydrometric Area 08) and the Broadmeadows sub-catchment (WFD name: Broadmeadow_SC_010, Id 08_3).

2.2 Regional Bedrock Geology

Inspection of the available GSI (2021) records (Data Sheet 16 and on-line mapping database) shows that the bedrock geology of the site and the surrounding area is dominated by rocks from the Chadian and Tournaisian age. The site is located over dark-grey, calcareous, commonly bioturbated mudstones and subordinate thin micritic limestones referred to as the Tober Colleen Formation (Rock Unit code: CDTOBE) and over pale-grey, crudely bedded or massive limestone associated to the Waulsortian Limestones Formation (CDWAUL) to the west. (refer to Figure 2.2 below).

The regional area is highly geologically variable. GSI maps do show the site as overlying the Tober Colleen formation which is bordered to the south west by Waulsortian Limestones (which have been noted to underly the Tober Colleen), further to the south by the Boston Hill Formation, to the south east by the Lucan Formation and to the north by the Malahide Formation. Due to this variability the GSI (2020) bedrock geology map (100K structural database) indicates a number of faults in the study area with one bounding the sites to the south west.

Figure 2.2 Bedrock Geology Map (GSI, 2021)

2.3 Soil and Subsoil

The GSI/ Tegasc mapping shows that the soil type beneath the local area is composed of BminPD, mainly basic poorly drained soils and BMinDW mainly basic deep well-drained soils as presented in Figure 2.3 below.

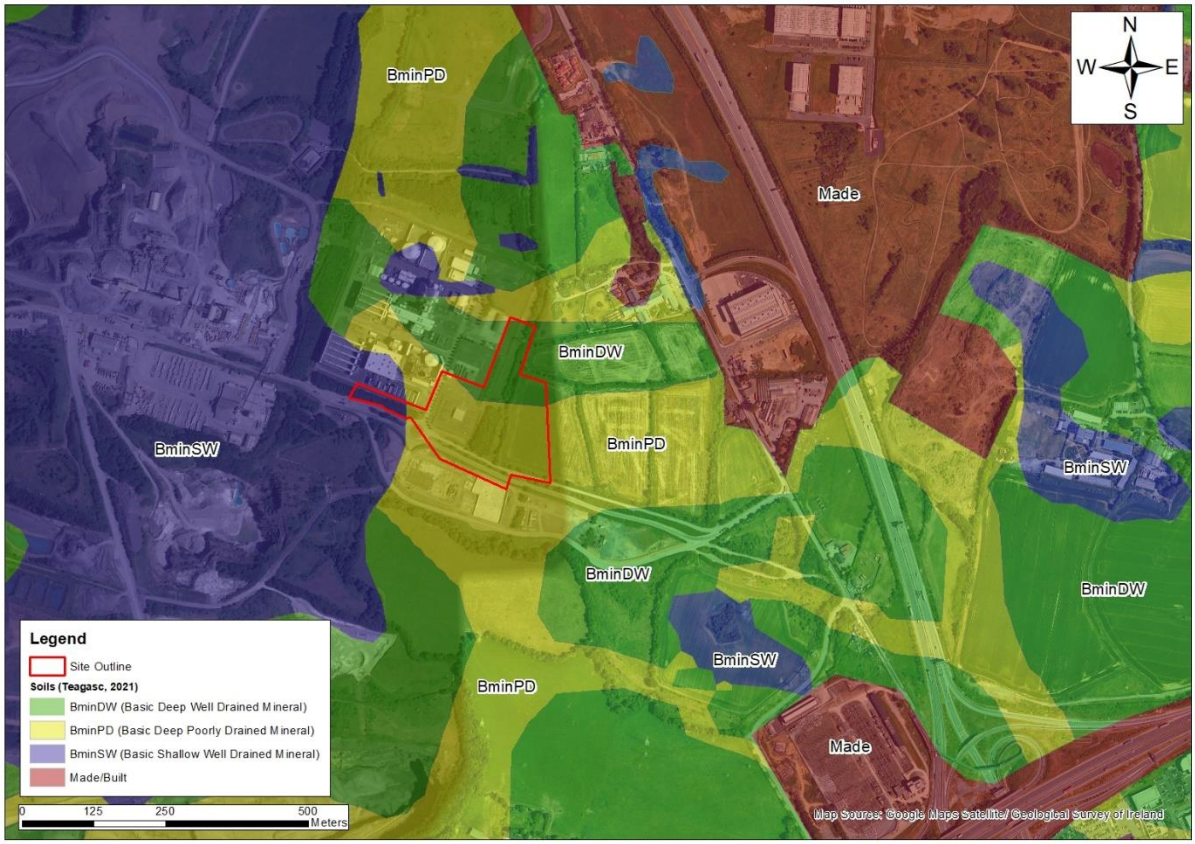

Figure 2.3 *Soils Map (GSI, 2021)*

The Quaternary geological period extends from about 1.5 million years ago to the present day and can be sub-divided into the Pleistocene Epoch, which covers the Ice Age period, and which extended up to 10,000 years ago and the Holocene Epoch, which extends from that time to the present day.

The GSI/ Teagasc mapping database of the subsoils in the area of the subject site indicates three principal soil types, as shown in Figure 2.4 below. The subsoil type present across the site is:

- LIMESTONE till Carboniferous (TLs). The majority of the subject site is composed of limestone TILL. This till is made up of glacial CLAYs which are less permeable than alluvium subsoils.

Bedrock outcrops would be located to the west of the site, according to GSI mapping.

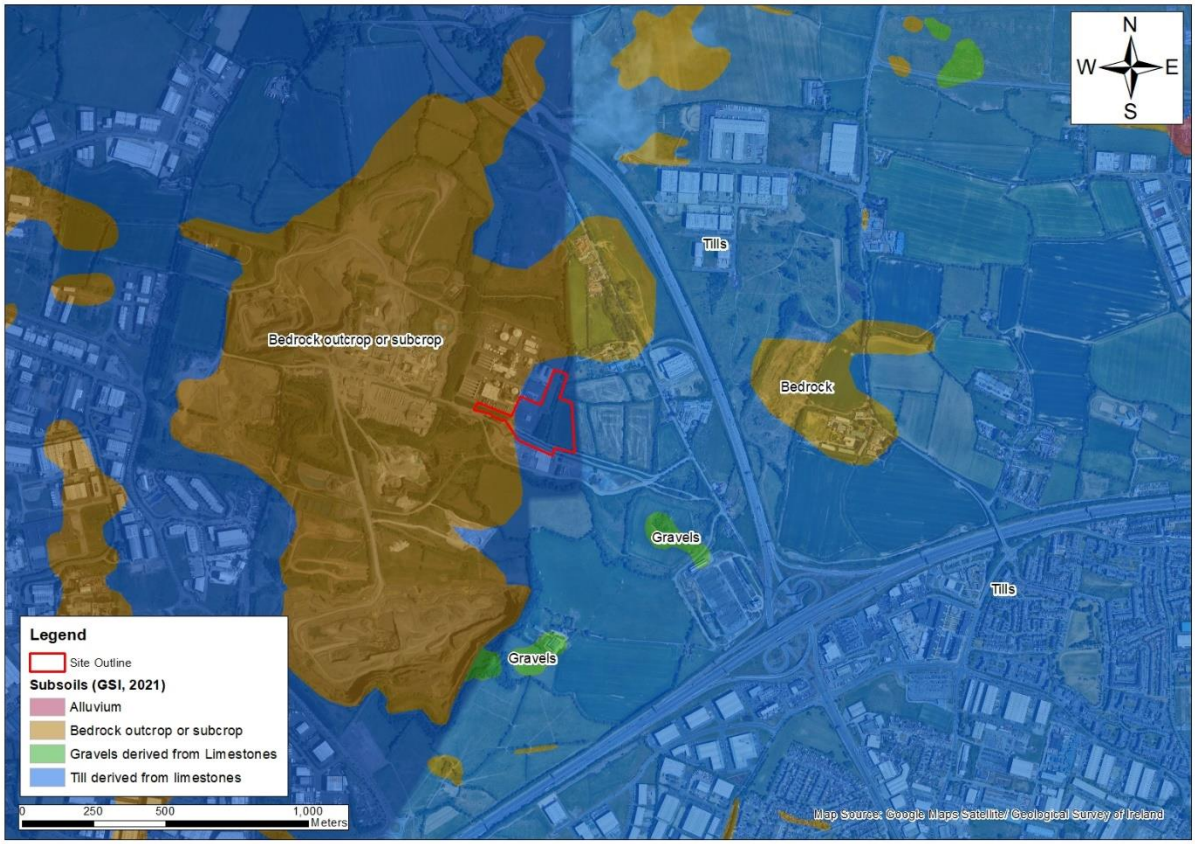

Figure 2.4 *Subsoils Map (GSI, 2021)*

3.0 DEVELOPMENT CHARACTERISTICS

The proposal comprises the construction of a 2 storey 220kV Gas Insulated Switchgear (GIS) substation (known as 'Mooretown'), 1 no. 220kV series coil, 4 no. 220/20kV transformers, interconnecting 220kV underground cables, Client Control Building, and 4 no. 220kV short sections (100 – 300m) of underground cables to connect to the adjacent existing cable infrastructure, 4 no. cable trenches, fire walls, lightning monopoles and associated compound and site infrastructure to be located on a 4.3 ha site in the townland of Huntstown, Johnstown and Coldwinters, North Road, Finglas, Dublin 11.

The proposed 2 story 220 kV Gas Insulated Switchgear (GIS) substation is to be constructed to EirGrid standards, comprising cable pit/entry room, generator room, relay room, battery room, workshop, toilet, storeroom, mess room, hoist space, stair cores and circulation areas. The substation will serve the proposed data hall buildings (as described in Chapter 2, Section 2.3), as well as any future development on the wider landholding.

The proposed underground cable (Cable No. 1) will follow a route originating at the proposed Mooretown GIS Substation extending south and then west just north of the private road connecting the North Road with Huntstown Power Station and Huntstown Quarry. The route terminates at a proposed joint bay on the existing Corduff – Huntstown A (AIS) cable route. The underground cable (Cable No. 2) will follow a route originating at the proposed Mooretown GIS Substation Compound / series coil extending south under the internal road connecting the North Road with Huntstown Power Station and Huntstown Quarry. The route terminates at a proposed joint bay on the existing Finglas – Huntstown B (AIS) cable route. The proposed underground cable

(Cable No. 3) will follow a route originating at the proposed Mooretown GIS Substation extending south and then west to the adjacent existing Huntstown A AIS station. The route terminates in the Huntstown A AIS ESB Station. The proposed underground cable (Cable No. 4) will follow a route originating at the proposed Mooretown GIS Substation extending south and then west to the adjacent existing Huntstown B AIS station. The route terminates in the Huntstown B AIS ESB Station.

The development includes all associated and ancillary site development and construction works, services provision, drainage works, all internal road/footpath access routes, landscaping and boundary treatment works, vehicular access onto the private road to the south of the site and provision of car parking spaces in the substation compound.

The surface water network has been designed to provide sufficient capacity to contain and convey all surface water runoff associated with the 1 in 100 year event to the attenuation basins without any overland flooding including an additional allowance of 10% in rainfall intensities due to climate change. Discharge flow will be restricted to the greenfield equivalent runoff for the catchment area.

In addition to the management of rainwater runoff; in order to facilitate the proposed development includes infilling existing land drain along the western side of the site and replacing with a pipe. This existing land drain flows south to north and is proposed to be replaced with a new 900mmø pipe. The proposed ditch diversion is required to take account of the requirements of OPW Guidelines for the Construction, Replacement or Alteration of Bridges and Culverts (OPW Guidelines)) which are outline below:-

- Diversion pipe to be capable of passing a fluvial flood flow with a 1% annual exceedance probability (AEP) or 1 in 100 year flow without significantly changing the hydraulic characteristics of the watercourse;
- Diversion pipe to maintain a freeboard of 300mm;
- Diversion pipe capable of operating under the above design conditions without causing a hydraulic loss of no more than 300mm;
- Diameter must not be less than 900mm;
- All calculations have allowed for an additional allowance of 10% in rainfall intensities to allow for climate change as per Table 6.1 of Volume 2 of the GDSDS.

The proposed development is described in further detail in the EIA, Chapter 2 (Description of the Proposed Development).

3.1 Proposed Drainage

An existing ditch crosses the site (refer to Figure 2.1 above), and this will be diverted as part of the proposed development application. The diversion has been designed in accordance with OPW Guidelines in order to ensure there will be not impact on the site in terms of flood risk. Details of the design of the ditch diversion, and associated engineering calculations, are provided in its associated CSEA Engineering Planning Report (Document No. 20_099-CSE-00-XX-RP-C-005), included along with the Infrastructure Report (AECOM, 2021) with the planning application documentation.

4.0 FLOOD RISK IDENTIFICATION

In broad terms, the potential sources of flooding at the site can be categorised as:

- Fluvial (River) Flooding: The main risk of fluvial flooding is from the Powerstown Stream (Pinkeen East) to the north east of the site.
- Tidal/Coastal Flooding: The risk from coastal flooding is from surge events in the Irish Sea, this would appear to be low as the site is a considerable distance inland from the coast (c. 15 km)
- Pluvial Flooding: Pluvial flooding occurs when the capacity of the local urban drainage network is exceeded during periods of intense rainfall. At these times, water can collect at low points in the topography and cause flooding.
- Groundwater Flooding: Groundwater Flooding can occur during lengthy periods of heavy rainfall, typically during late winter/early spring when the groundwater table is already high. If the groundwater level rises above ground level, it can pond at local low points and cause periods of flooding. Groundwater flood is usually associated with areas of high karstification i.e. the west of Ireland.

Each of these potential sources of flooding are considered in this FRA.

4.1 Existing Flood Records and Flood Zone Identification

The national flood hazard mapping website (www.floodmaps.ie) indicates that the site is not subject to flood in the 1:1000 year event (0.1% AEP) and falls within Flood Zone C (refer to Figure 4.1 below).

There is no history of flood on the site. The two closest historical events where at Kilshane Cross circa 1.3 km to then north (caused by overland flow from agricultural land) and at Dubber Cross circa 1.4 km to the east (caused by a ditch overflowing into a pumping station). Both of these events occurred in 2002.

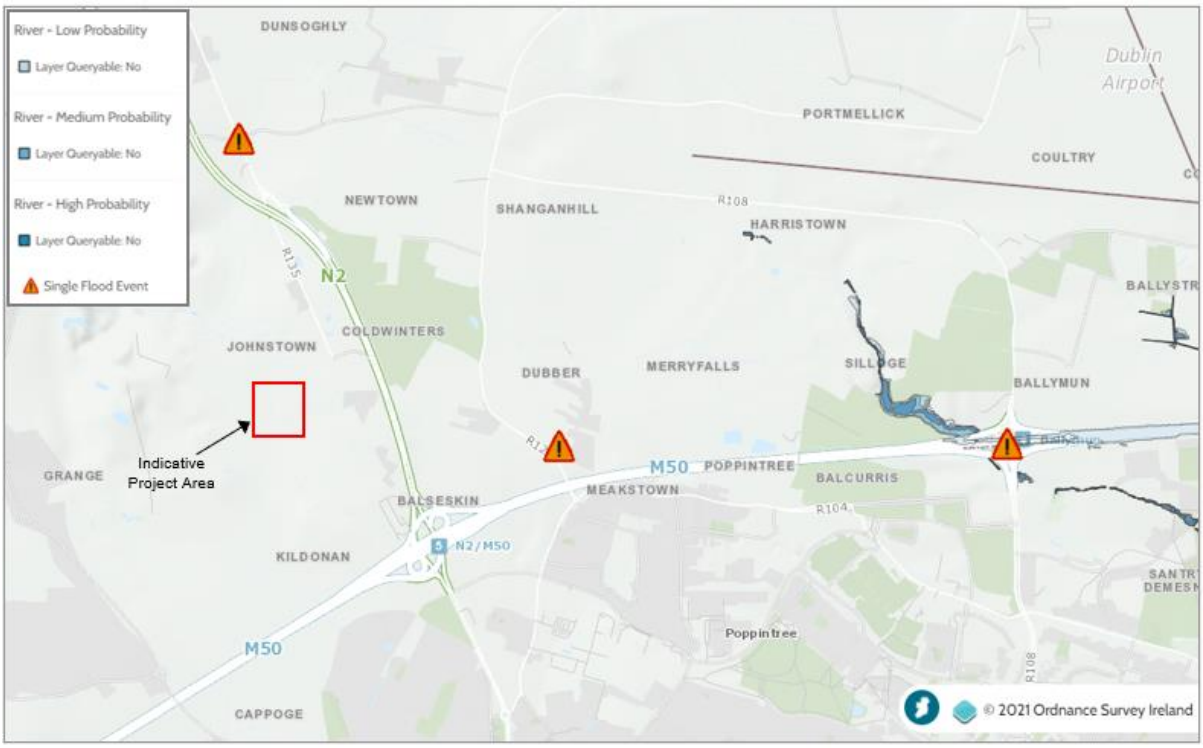

Figure 4.1 Extract from OPW Flood Map for the Site Area (OPW, 2021)

4.2 Fluvial Flooding

CFRAM Preliminary Flood Risk Assessment (PFRA)

The EU Floods Directive (2007/60/EC) required Member States to undertake a national preliminary flood risk assessment by 2011 to identify areas where significant flood risk exists or might be considered likely to occur. Members States were also required to prepare catchment-based Flood Risk Management Plans by 2018 that will set out flood risk management objectives, actions and measures. The OPW in co-operation with various Local Authorities produced a number of PFRAs which aimed to map out current and possible future flood risk areas and develop risk assessment plans. These have been used to form the Draft Flood Risk Management Plans aimed at identifying possible structural and non-structural measures to improve the flood risk.

As part of the CFRAM programme provisional floodmaps had been produced by the OPW which have been used in this assessment. The PFRA flood maps do not indicate flooding risk along the proposed cable routes.

A Strategic Flood Risk Assessment (SFRA) for the Fingal Development Plan 2017-2023 was developed and published in March 2017. Fluvial flood zone mapping was developed for this by RPS Engineers and its Map 19 is shown in Figure 4.2 below. This shows the proposed routes outside any identified flood zones.

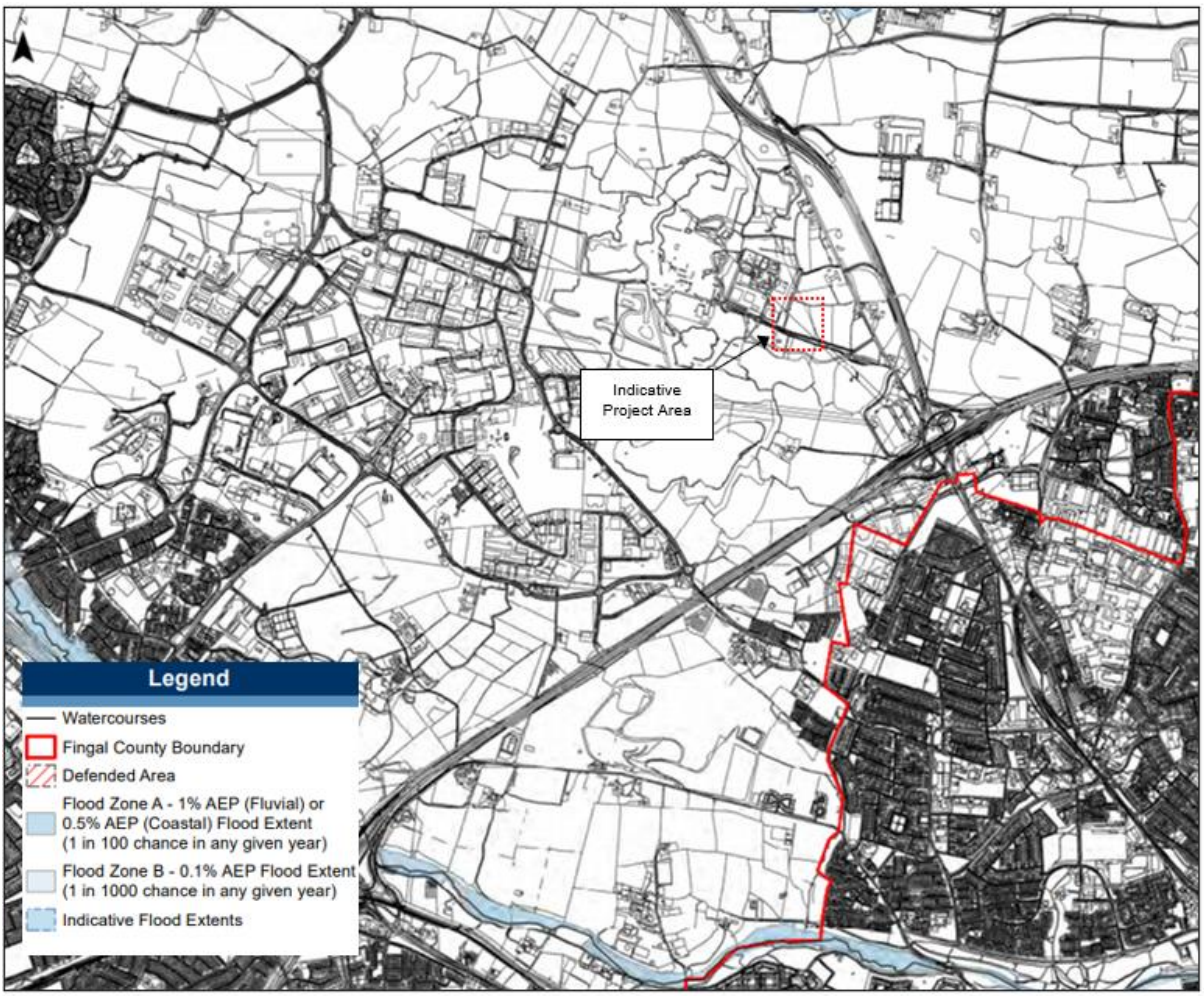

Figure 4.2 *Fingal County Council SFRA Map 19*

From reviewing Figures 4.1 and 4.2 it is shown that the route of the cables is Flood Zone C i.e. the probability of flooding is low (less than 0.1% AEP or in 1 in 1000 year). The proposed development may categorised as "Appropriate" as per the FRA Guidelines (OPW, 2009) as the development is "*Water-compatible development*".

Table 3.2 of the OPW Guidelines illustrates those types of development that would be appropriate to each flood zone and those that would be required to meet a Justification Test (See Insert 1.1 above).

As indicated in Insert 1.2 above, the OPW Guidelines state that highly vulnerable development is deemed appropriate within Flood Zone C, therefore a Justification Test for Development Management is not required in this case.

4.3 Pluvial Flooding

Pluvial flooding is usually caused by intense rainfall that may only last a few hours. The resulting water follows natural valley lines, creating flow paths along roads and through and around developments and ponding in low spots, which often coincide with fluvial floodplains in low lying areas. Any areas at risk from fluvial flooding will almost certainly be at risk from pluvial flooding.

CFRAM Final Pluvial Flood Maps for the catchment were available as referred to in Figure 4.3 below. As it can be seen, punctual zones to the south of the subject area would be at risk of pluvial flooding. However, the area surrounding the site is not listed as one of the areas at risk from indicative pluvial flooding included in FCC's SFRA.

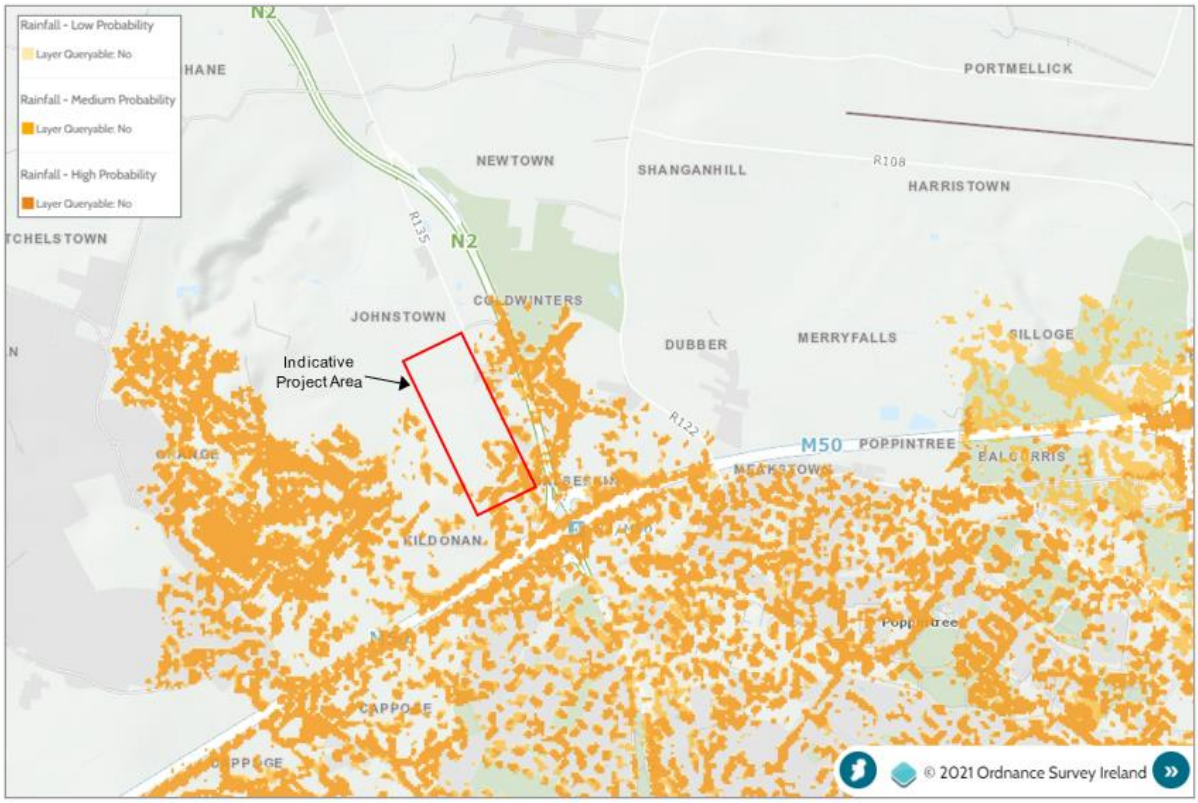

Figure 4.3 OPW CFRAM Pluvial Flood Risk Extent (site location shown)

4.4 Groundwater Levels

Based on a GSI search there is no current or historical or current evidence of groundwater inundation for the site. Local groundwater has been measured at depths

of 1.85 to 8.3 m below ground level during summer season. The area surrounding the site is also not listed as one of the areas at risk from indicative groundwater flooding included in FCC's SFRA.

The area in the vicinity of the site is generally serviced by public mains. There are no public water supplies sourced from groundwater in the area and there are no groundwater Source Protection Zones in the vicinity of the site.

4.5 Overview of Flood Risk Identification

Historic flood maps were reviewed for the study area and do not indicate a history of flooding of the proposed cable routes. The CFRAM PFRA of FCC SFRA maps do not indicate any fluvial flooding (1% AEP or 0.1% AEP) on or in proximity to the subject site which would not suggest a risk of flooding. This route is therefore classified as being located within a designated Flood Zone C i.e. where the probability of flooding is low (less than 0.1% AEP or 1 in 1000 for both river and coastal flooding).

There would be a minor risk in specific areas associated with pluvial events to the south of the site. However, the FCC has not categorized the area as being at risk from pluvial flooding

5.0 CONCLUSION

This report sets out the flood risk assessment of the application, in accordance with the FRM guidelines. The assessment is based on the best data available in the public domain at the time of writing.

A Flood Risk Assessment is undertaken over several stages with the need for progression to a more detailed stage dependent on the outcomes of the former stage. The sequential approach, as outlined in the FRM guidelines, was undertaken.

The review of the available data on fluvial, pluvial and groundwater flooding the proposed substation and grid connection has no historical flood hazard identified in the vicinity, the route falls within Flood Zone C and no further justification test is required. There will be no impact on the existing hydrological regime and as such there is no likely flood risk associated with the proposed development.

Based on this information the proposed development complies with the appropriate policy guidelines for the area which include the Fingal County Development Plan 2017-2023 and the National Development Plan 2018-2027.