
RIVER PODDLE FLOOD ALLEVIATION SCHEME

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

VOLUME 2 – MAIN REPORT

PART III – REFERENCES AND ABBREVIATIONS (CHAPTERS 18 AND 19)



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List of Contents

18 REFERENCES	18-1
19 GLOSSARY.....	19-1

18 REFERENCES

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- www.osi.ie – Ordnance Survey Ireland aerial photographs dating to 1995, 2000 & 2005 and 6"/25" historical OS maps.
- <https://www.google.com/earth/> – Aerial photographs of the proposed development area
- <https://www.bing.com/maps> - Aerial photographs of the proposed development area

19 GLOSSARY

Abbreviations

AA	-	Appropriate Assessment
ABP	-	An Bord Pleanála
ACA	-	Architectural Conservation Area
AEP	-	Annual Exceedance Probability
AFA	-	Area for Further Assessment
BCT	-	Bat Conservation Trust
BCR	-	Benefit Cost Ratio
BH	-	Built Heritage
BOD	-	Biochemical Oxygen Demand
BS	-	British Standard
BSI	-	British Standards Institution
BSBI	-	Botanical Society of the British Isles
CAFE	-	Ambient Air Quality and Cleaner Air for Europe Directive
CCTV	-	Closed-Circuit Television
CDP	-	County Development Plan
CEMP	-	Construction Environmental Management Plan
CFRAM	-	Catchment Flood Risk Assessment and Management
CIfA	-	Chartered Institute for Archaeologists
CIEEM	-	Chartered Institute of Ecology and Environmental Management
CIRIA	-	Construction Industry Research and Information Association
CJEU	-	Court of Justice of the European Union
CO	-	Carbon Monoxide
CO ₂	-	Carbon Dioxide
COR	-	Certificate of Registration
CRTN	-	Calculation of Road Traffic Noise
CSO	-	Central Statistics Office
dB	-	Decibel
dB(A)	-	Decibel (A-weighting)
DCC	-	Dublin City Council

DDF	-	Depth, Duration and Frequency
DL	-	Designed Landscapes
DMRB	-	Design Manual for Roads and Bridges
DoCHG	-	Department of Culture, Heritage and the Gaeltacht
DoECLG	-	Department of the Environment, Community & Local Government
DoHPLG	-	Department of Housing, Planning and Local Government
E	-	East
EC	-	European Community
EcIA	-	Ecological Impact Assessment
ECoW	-	Ecological Clerk of Works
ED	-	Electoral Division
EIA	-	Environmental Impact Assessment
EIAR	-	Environmental Impact Assessment Report
EMRA	-	Eastern & Midland Regional Assembly
EPA	-	Environmental Protection Agency
ESB	-	Electricity Supply Board
EU	-	European Union
FAS	-	Flood Alleviation Scheme
FRA	-	Flood Risk Assessment
FRM	-	Flood Risk Management
FRMP	-	Flood Risk Management Plan
FRS	-	Flood Relief Scheme
FSR	-	Flood Studies Report
FSU	-	Flood Studies Update
G	-	Green Infrastructure
GSDSDS	-	Greater Dublin Strategic Drainage Strategy
GIS	-	Geographic Information Systems
GLVIA	-	Guideline for Landscape and Visual Impact Assessment
GSI	-	Geological Survey of Ireland
ha	-	Hectare
HA	-	Hydrometric Area

HCV	-	Heavy Construction Vehicle
HEFS	-	High End Future Scenario
HEP	-	Hydrological Estimation Point
HGV	-	Heavy Goods Vehicle
hr	-	hour
HV	-	High Voltage
Hz	-	Hertz
ICW	-	Integrated Constructed Wetland
IDA	-	Industrial Development Authority
IE	-	Infrastructure & Environmental
IFI	-	Inland Fisheries Ireland
IGH	-	Irish Geological Heritage
IGI	-	Institute of Geologists of Ireland
ISO	-	International Organization for Standardization
IW	-	Irish Water
Kg	-	Kilogram
Km	-	Kilometre
LAQM	-	Local Air Quality Management
LAP	-	Local Area Plan
L _{den}	-	Day-evening-night noise indicator
L _{Aeq}	-	Equivalent Sound Level
L _{Amax}	-	Maximum Sound Level
LHS	-	Left Hand Side
LI	-	Locally Important Aquifer Zones
LUAS	-	Dublin Tram system
LVIA	-	Landscape and Visual Impact Assessment
m	-	metres
m ²	-	metres squared
m ³	-	metres cubed
maOD	-	metres above Ordnance Datum
mbar	-	Millibar

MCA	-	Multi-criteria Analysis
mg	-	milligrams
mph	-	Miles per hour
MRFS	-	Mid Range Future Scenario
MRP	-	Molybdate Reactive Phosphorus
m/s	-	metres per second
mm/s	-	millimetres per second
MVLV	-	Medium Voltage & Low Voltage
N	-	North
NAF	-	National Adaption Framework
NBDC	-	National Biodiversity Data Centre
NCCS	-	National Climate Change Strategy
NDP	-	National Development Plan
NFPM	-	Natural Floodplain Management
NHA	-	Natural Heritage Area
NIAH	-	National Inventory of Architectural Heritage
NIS	-	Natura Impact Statement
NMI	-	National Monument of Ireland
NML	-	Noise Monitoring Location
NO ₂	-	Nitrogen Dioxide
NO _x	-	Nitrogen Oxides
NPF	-	National Planning Framework
NPWS	-	National Parks and Wildlife Service
NRA	-	National Roads Authority
NSL	-	Noise Sensitive Location
OCEMP	-	Outline Construction Environmental Management Plan
OD	-	Ordnance Datum
OS	-	Ordnance Survey
OSI	-	Ordnance Survey Ireland
OPW	-	Office of Public Works
PCPM	-	Project Controls Procedures Manual
PFRA	-	Preliminary Flood Risk Assessment

PM	-	Particulate Matter
PM ₁₀	-	Airborne particulate matter (less than 10 micrometres in diameter)
PM _{2.5}	-	Airborne particulate matter (less than 2.5 micrometres in diameter)
pNHA	-	proposed Natural Heritage Area
ppb	-	parts per billion
PPV	-	Peak Particle Velocity
PRV	-	Pressure Reducing Value
PSDP	-	Project Supervisor Design Process
PSCS	-	Project Supervisor Construction Stage
RBD	-	River Basin District
RHS	-	Right Hand Side
RMP	-	Record of Monuments and Places
RPO	-	Regional Policy Objectives
RPS	-	Record of Protected Structures
RSA	-	Road Safety Authority
RSES	-	Regional Spatial & Economic Strategy
S	-	South
SAC	-	Special Area of Conservation
SACs	-	Special Areas of Conservation
SDCC	-	South Dublin County Council
SE	-	South East
SEA	-	Strategic Environmental Assessment
SFRA	-	Strategic Flood Risk Assessment
S.I.	-	Statutory Instrument
SMR	-	Sites and Monuments Record
Sp.	-	Species
SPA	-	Special Protection Area
sqm	-	Square metre (also denoted as m ²)
SuDS	-	Sustainable Urban Drainage Systems
THC	-	Total Hydrocarbons
TII	-	Transport Infrastructure Ireland
Tp	-	Time to peakTPO

TPO	-	Tree Preservation Orders
TWL	-	Top Water Level
µg	-	micro-grams
µm	-	micro-metres
VOC	-	Volatile Organic Compounds
W	-	West
WFD	-	Water Framework Directive
WHO	-	World Health Organisation

Terms

Below is provided a partial glossary of terms used in this EIAR. The definitions therein are not to be taken as comprehensive but solely as an aid to the non-technical reader.

%ile – Percentile.

Accommodation Works – Ancillary works carried out by a local roads authority to mitigate the effects of the construction of a development (such as a road) on a property.

Age Dependency Ratio - The ratio of dependents - people younger than 15 or older than 64-to the working-age population-those aged 15-64.

Ancillary works – construction works which are not core construction (e.g. roads) but are inherently related, including but not limited to site investigation works.

Annual Exceedance Probability (AEP) – the chance of a flood event occurring in any year, expressed as a percentage. For example, a large flood which may be calculated to have a 1% (1 in 100) chance to occur in any one year is described as 1% AEP.

Appropriate Assessment (AA) – Appropriate Assessment (AA) is a process required Article 6, paragraphs 3 and 4 of the EU Habitats Directive to be undertaken by a competent authority where any plan or project not directly connected with or necessary to the management of a European site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, is subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject, the competent authority may agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned. An AA is not required if it can be concluded that it can be excluded, on the basis of objective scientific information, and in light of the conservation objectives of relevant sites, that the development either individually or in combination with other plans or projects, would have likely significant effects on any European sites.

Aquifer – A body of permeable rock that is capable of storing significant quantities of water.

Attenuation - To reduce in force, amount, value or degree the effect of impacts associated with a particular project.

Arboriculture –The cultivation, management and study of individual trees, shrubs, vines and other perennial woody plants.

Arboricultural Impact Assessment – Written assessment which determines the site-specific effect of a planned development on the existing tree stock.

Archaeology - The study of past societies of any period through the material remains left by those societies and the evidence of their environment. The material things (objects, monuments, sites, features, deposits) which archaeology uses to study past societies are referred to as 'archaeological heritage'.

Baseline survey - A description of the existing environment against which future changes can be measured.

Benefit Cost Ratio – Ratio that attempts to summarise the overall value for money of a project or proposal.

Catchment – Process of collecting water, in particular the process of water flowing from the ground and collecting in a river.

Channelling (Channel Realignment/Regrading) – The alteration of a natural stream/river/waterway by excavation, realignment, lining or other means, usually completed to change the flow of water.

Climate Change – Climate change is any significant long-term change in the expected patterns of average weather of a region (or the whole Earth) over a significant period of time.

Competent Authority - Any authority responsible for consenting development, licensing or permitting and, as the case may be, after conducting an Environmental Impact Assessment and coming to a reasoned conclusion on the likely significant effects of the proposed development on the environment.

Compulsory Purchase Order (CPO) - Method by which the land required for the development (e.g. road scheme) is acquired.

Integrated Constructed Wetland – An unlined free surface flow constructed wetland that uses natural functions such as vegetation, soil and organisms to increase water quality.

Construction Environmental Management Plan (CEMP) – Outlines how a construction project will avoid, minimise or mitigate effects on the environment and the surrounding area.

Cut – Section of earthworks where the level of the proposed road is below original ground level

Culvert – a structure/tunnel which diverts a stream or open drain under a road or railway.

Decibels (dB) – The unit of measurement of sound intensity.

dB (A) - The term used to express a level of sound or decibel level. The (A) denotes that levels are 'A'-weighted.

Ecology – The study of the relationship among organisms and between those organisms and their non-living environment, including interactions with their surroundings.

Ecological Clerk of Works (ECoW) - Provides advice and guidance throughout the construction process to ensure compliance with legislation and planning conditions.

Effect - Any change in the physical, natural or cultural environment brought about by a development project. Effect and Impact are used interchangeably.

Electrofishing – A common scientific method used to sample fish populations to determine abundance, density and species composition.

Electoral Division (ED) – Administrative areas used to define local electoral areas for elections to county and city councils and to define constituencies in elections to Dáil Éireann.

Emission – This can include a) an emission into the atmosphere of a pollutant; b) a discharge of polluting matter, sewage effluent or trade effluent to waters or sewers; c) disposal of waste; or d) noise.

Embankment – A wall or artificial bank of earth or stone built to prevent a river flooding an area.

Environmental Impact Assessment (EIA) – Environmental Impact Assessment (EIA) is a process to be undertaken by a competent authority in respect of applications for specified classes of development listed in the EU EIA Directive before a decision in respect of development consent is made. The process involves the preparation of an Environmental Impact Assessment Report (EIAR) by the applicant, consultations with the public, relevant prescribed bodies and any other affected Member States, and an examination and analysis of the EIAR and other relevant information leading to a reasoned conclusion by the competent authority on the likely significant effects of the proposed development on the environment.

Environmental Impact Assessment Report (EIAR) – An Environmental Impact Assessment Report (EIAR) is the document or statement produced by the applicant in respect of development of a type which is required to undergo an Environmental Impact Assessment.

Environmental Impact Assessment Scoping – The scoping process identifies the issues that are likely to be of most importance during the Environmental Impact Assessment and eliminates those that are of little concern.

European Site (Natura 2000 site) – A European protected site or area which is considered to be a core breeding and/or resting site for rare and threatened species, and some rare natural habitat types which are protected in their own right.

Fauna – A collective term for the animals of a region.

Fill – Material used for the raising of the level of the ground.

Flap Valve – a valve opened and closed by a plate hinged at one side. Commonly used for pipes which carry water, the water pressure opens the valve as required.

Flora – A collective term for the plants of a region.

Floodplain – an area of low-lying ground adjacent to a river/stream, formed mainly of river sediments and subject to flooding.

Flood Hazard Area – An identified area which will be flooded in a flood event having 1% chance of being equalled or exceeded in any given year.

Flood Risk Management Plan – A catchment/river basin scale Plan which details the measures aimed to achieve the objectives for the management of flood risks.

Fluvial Flooding – Occurs when excessive rainfall causes a river to exceed its capacity.

Freeboard – The additional height of the watertight portion of a given structure to allow for variances in modelling.

Geology - The science of the earth, including the composition, structure and origin of its rocks.

Geotextile Membrane – Large sheets of fabric that are used in ground engineering and drainage applications such as ground filtration, soil separation, ground reinforcement and soakaways and land drains.

Green Infrastructure – A strategically planned network of natural and semi-natural areas with other environmental features designed to deliver a wide range of ecosystem services such as water purification, air quality and space for recreation and climate mitigation and adaptation.

Greenhouse Gases – Gaseous constituents of the atmosphere that absorb/trap infrared (thermal) radiation which is mainly emitted by the Earth's surface and thereby influence the Earth's temperature.

Groundwater – Underground water that is in the soil or rocks.

Habitat – The natural home of a plant or an animal where it spends part or all of its life.

Habitats Directive – A European law that requires Ireland to protect its wild plant and animal populations. Important habitats for plants and animals are designated as Special Areas of Conservation.

Hydrology - The science concerned with the occurrence and circulation of water in all its phases and modes, and the relationship of these to man.

Hydrometric Area – Grouping of river catchments having outlets to the sea and topographical similarity.

Hydraulic Modelling – A mathematical model of a water/sewer/storm system that is used to analyse a system's hydraulic behaviour.

Impact - The degree of change in an environment resulting from a development (see also effect above).

Impact Reduction - Where the significance of adverse impacts is lessened.

Imperceptible Impact - An impact capable of measurement but without noticeable consequences.

Indirect Impact - Impacts on the environment which are not a direct result of the project, often produced away from the project or as a result of a complex pathway.

Infrastructure – Basic public facilities *e.g.* roads, sewers, water supply, telephones and electricity.

Interactions (impacts) - The reactions between impacts on different environmental factors, whether between the impacts of just one project or between the impacts of other projects in the area.

Invasive Species – A species that is not native to a specific location, and that has a tendency to spread to a degree believed to cause damage to the environment.

Leq - Equivalent continuous steady sound level; effectively an average value.

Land take – Land required for the construction of the proposed new road.

Land use - The activities which take place within a given area or space.

Likely Effects/Impacts - The effects that are proposed to take place - based on an understanding of the interaction of the proposed development and the receiving environment.

Local Area Plan – Detailed look at a specific area that identifies and analyses the various issues of relevance, before establishing and setting out principles for the future development of the area. A Local Area Plan is a legal or statutory document prepared in accordance with Part II, Section 20 of the Planning and Development Act 2000 as amended and is required for areas which have in excess of 5,000 population, and may be prepared for areas which require economic, physical and social renewal and for areas likely to be subject to large scale development within the lifetime of the plan. .

Local Authority – Organisation that is officially responsible for all the public services and facilities in a particular area.

Long-Term Impact - Impact lasting fifteen to sixty years.

Medium-Term Impact - Impact lasting seven to fifteen years.

Methodology - The specific approach or techniques used to analyse impacts or describe environments.

Mitigation Measures – To mitigate means to ease or soothe the effect of mitigation; measures suggest ways to avoid or lessen the negative effects of a project on the environment.

Moderate Impact - An impact that alters the character of the environment in a manner that is consistent with the existing and emerging trends.

Monitoring - The repetitive and continued observation, measurement and evaluation of environmental data to follow changes over a period of time, to assess the efficiency of control measures.

Multi Criteria Analysis (MCA) – A decision-making analysis that evaluates multiple criteria as part of the decision-making process.

Natura Impact Statement (NIS) - The statement prepared as required under the Habitats Directive which presents information on the assessment and the process of collating data on a project and its potential significant impacts on European sites.

Natura 2000 site – European network of core breeding and resting sites for rare and threatened species and some rare natural habitat types which are protected in their own right.

Natural Heritage Area (NHA) – Non-statutory designation of an area of special interest for its fauna, flora, geology and/or topography.

Natural Floodplain Management – Involves implementing measures that help protect, restore and emulate the natural functions of catchments, floodplains, rivers and the coast.

Negative Impact - A change which reduces the quality of the environment (for example, by lessening species diversity and the reproductive capacity of the ecosystem, by damaging health, property or by causing nuisance).

Nesting Period – Period or season when birds and other animals build nests, lay eggs and in most cases raise their young.

Neutral Impact - A change which does not affect the quality of the environment.

Particulates - Fine solids or liquid droplets suspended in the air.

Permanent Impact - Impact lasting over sixty years.

pH - Figure expressing the acidity or alkalinity of a solution on a logarithmic scale on which 7 is neutral, lower values are more acid and higher values more alkaline.

Photomontage – Images generated from photographs using software to show how the project will look once construction is complete.

Pluvial Flooding – flooding that results from rainfall-generated overland flow, before the flow enters any watercourse or sewer.

Pollution - Any release to the environment which has a subsequent adverse effect on the environment or man.

Positive Impact - A change which improves the quality of the environment (for example by increasing species diversity and the reproductive capacity of the ecosystem, or by removing nuisances or improving amenities).

Preliminary Flood Risk Assessment – A broad Flood Risk Assessment screening exercise which aims to inform and identify areas where there was an immediate risk and impact associated with flooding which may require further detailed assessment.

Profound Impact - An impact which obliterates sensitive characteristics.

Proposed Natural Heritage Area (pNHA) – Natural Heritage Areas that were published on a non-statutory basis in 1995 and have not since been statutorily proposed or designated.

Receptor - Any element in the environment which is subject to impacts.

Relative Deprivation Score - A measurement of different factors to determine how affluent or deprived a particular area is based on key indicators including the proportion of skilled professionals, educational attainment, employment levels, age dependency ratio and the number of single-parent households.

Residual Impact - The degree of environmental change that will occur after the proposed mitigation measures have taken effect.

Salmonid River – River containing fish of the Salmonidae family, including salmon, trout char and whitefish.

Scoping - The process of identifying the content and extent of the environmental information to be submitted to the Competent Authority under the EIA procedure.

Screening Report – The Report which summarises the results of an Appropriate Assessment Screening (Stage 1) or Environmental Impact Assessment screening.

Sensitivity - The potential of a receptor to be significantly changed.

Services – The conduits, pipes and lines that carry water, telephone, electricity, sewage, *etc.*

Severance – A term used to describe the possibility that a development may disrupt activities or movements in an area or divide an area, community, *etc.* in an adverse manner.

Short-Term Impact - Impact lasting one to seven years.

Significance - The sensitivity of a receiving environment to change or the consequence of change for the receiving environment.

Significant Impact (or Significant Effect) - An impact which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.

Slight Impact - An impact which causes changes in the character of the environment which are not significant or profound.

Special Area of Conservation (SAC) – A place designated for protection because it is an important type of habitat for the plants or animals living there. Ireland is required to designate areas under the Habitats Directive.

Special Protection Area (SPA) – An area designated for protection because it is an important area for wild birds. Ireland is required to designate areas under the Birds Directive.

Species – An interbreeding group of plants or animals which have the same physical appearance.

Stakeholder – A person with an interest in or concern in a Project/Business *etc.*

Statutory Consultees - Organisations and authorities stipulated by Legislation to be notified by a competent authority if an application is made which might give that organisation a cause for concern.

Stormwater – large volumes of surface water resulting from heavy rain or snow.

Temporary Impact - An impact which is not permanent or lasting/ lasting for one year or less.

Topographical Survey – Useful in the planning and design stages to identify and map the contours of the ground and existing features on the surface of the earth.

Threshold - The magnitude of a project which, if exceeded, will trigger the requirement for an Environmental Impact Assessment to be carried out.

Water Framework Directive Status – An assigned acceptable/unacceptable waterbody status which either meets (high/good status) or does not meet (moderate/bad/poor status) the goals of the Water Framework Directive. 'Status' is considered to be the condition of the water in the waterbody. It is defined by its chemical status and its ecological status, whichever is worse. Waters are ranked in one of 5 status classes: High, Good, Moderate, Poor, Bad.

Watercourse – Channel that a flowing body of water follows.