

# Arklow Wastewater Treatment Plant Project

Environmental Impact Assessment Report

**Volume 2: Main text (Book 1 of 3)**





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## Glossary and Abbreviations

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AA	Appropriate Assessment – An assessment of the potential adverse effects of a plan or project (in combination with other plans or projects) on the Natura 2000 network of European designated sites for biodiversity as defined by the Habitats Directive
AADT	Annual Average Daily Traffic – The total volume of vehicle traffic of a motorway or road for a year divided by 365 days.
ACM	Asbestos Containing Material
AHU	Air Handling Unit
The Alps	The vacant land (approximately 2.9ha) located to the west of River Walk at Upper Main Street, between Parade Ground to the south and Avoca River to the north. This area is as defined as the Alps Opportunity Site in the Arklow LAP.
AQS	Air Quality Standards
Aquatic ecology	The topic that deals with all aspects of ecology in the River Thames up to and including the flood defence walls. This includes fish, invertebrates, marine mammals and aquatic plants using the River Thames and its foreshore areas. Wintering birds which use the foreshore are not included in the aquatic ecology section (Refer to terrestrial ecology)
Archaeological Heritage	the term ‘archaeological heritage’ is applied to objects, monuments, buildings or landscapes of an (assumed) age typically older than AD 1700 (and recorded as archaeological sites within the Record of Monuments and Places)
Architectural Heritage	The term ‘architectural heritage’ is applied to structures, buildings, their contents and settings of an (assumed) age typically younger than AD 1700  For the purposed of this report the terms ‘architectural heritage’ and ‘built heritage’ have the same intended meaning and are used interchangeably.
Area of Archaeological Potential	An area with known potential for significant archaeological remains as identified in the Wicklow County Development Plan 2016 -2022
Arklow Bridge	The 19 arch bridge over the Avoca River in between Arklow town (to the south) and Ferrybank (to the north).
Arklow LAP	Arklow Local Area Plan 2018 - 2024
As	Arsenic
Assessment area	Study area considered in the environmental assessment for a given topic
Baseline	Refers to existing conditions as represented by latest available survey and other data

Benthic	A description for animals, plants and habitats associated with the river or seabed
BGL	Below Ground Level
Birds Directive	Council Directive 79/409/EEC as amended by Council Directive 2009/147/EC on the conservation of wild birds
BOD	Biological Oxygen Demand – The amount of dissolved oxygen needed by aerobic biological organisms to break down organic material present in a given water sample at certain temperature over a specific time period
BSI	British Standards Institution
Caisson	A foundation formed by constructing a shaft, often supported by precast concrete segments in rings, and then filled with concrete
CCTV	Closed-circuit television
Cd	Cadmium
CDWMP	Construction and Demolition Waste Management Plan
CEMP	Construction Environmental Management Plan
CIRIA	Construction Industry Research and Information Association
COD	Chemical Oxygen Demand – The amount of oxygen consumed by reactors in a measured solution (that can be used to quantify organics in water)
Cofferdam	A temporary watertight structure to enclose an area underwater that is pumped dry to allow construction work to be carried out
COMAH	Control of Major Accidents Hazards involving Dangerous Substances
CoRTN	Calculation of Road Traffic Noise
County Development Plan	Wicklow County Development Plan 2018 - 2024
CPO	Compulsory Purchase Order
Cultural Heritage	<p>‘Cultural Heritage’ where used generically, is an over-arching term applied to describe any combination of archaeological, architectural and cultural heritage features.</p> <p>The term ‘cultural heritage’, where used specifically, is applied to other (often less tangible) aspects of the landscape such as historical event, folklore memories and cultural associations. This designation can also accompany an archaeological or architectural designation or describe features that have a more recent origin, but retain cultural heritage significance.</p>
CSM	Conceptual Site Model
CSO	Central Statistics Office
Cu	Copper

Cumulative effect	Likely significant effects arising from a cumulation of effects associated with the proposed development and other projects in the local area of relevance
DaS	Dumping at Sea
DBO	Design Build and Operate – A form of contract where the contractor is responsible for the design and construction of a facility, and has a long term responsibility for operation
DCCAE	Department of Communications, Climate Action and Environment
DCHG	Department of Culture, Heritage and the Gaeltacht
Decibel (dB)	The ratio of sound pressures, which we can hear, is a ratio of 106 (one million: one). For convenience, therefore, a logarithmic measurement scale is used. The resulting parameter is called the ‘sound pressure level’ (Lp) and the associated measurement unit is the decibel (dB). As the decibel is a logarithmic ratio, the laws of logarithmic addition and subtraction apply.
DIN	Dissolved inorganic nitrogen
DMRB	Design Manual for Roads and Bridges
DO	Dissolved oxygen
DoEHLG	Department of the Environment Heritage and Local Government
DSA	Detailed Site Assessment
DWF	Dry Weather Flow
ECJ	Court of Justice of the European Union
ED	Electoral Division
EIA	Environmental impact assessment
EIAR	Environmental Impact Assessment Report
The EIA Directive	Council Directive 2014/52/EU on the assessment of certain public and private projects on the environment
EIS	Environmental Impact Statement
ELV	Emission limit value
EPA	Environmental Protection Agency
ETS	Emissions Trading Scheme
EU	European Union
European designated site	The Natura 2000 site network, i.e. Special Areas of Conservation - (including candidate SACs) protected under the provisions of the Habitats Directive and Special Protection Area - (including proposed SPAs) protected under the provisions of the Birds Directive
FFT	Full flow to treatment
Fluvial	Relating to a river, i.e. fluvial flow is the flow of freshwater

Foreshore	The area of a shore that lies between the mean high water and mean low water mark
FOG	Fat, Oil and Grease (removal)
FSR	Flood Studies Report
GDA	Greater Dublin Area
GSDS	Greater Dublin Strategic Drainage Study
GE	General Electric
GHG	Greenhouse Gas
GI	Ground Investigations
GNI	Gas Networks Ireland
GSI	Geological Survey of Ireland
ha	Hectare
Habitat	An area or natural environment formed of physical factors such as soil and moisture that reside in a defined topographical area in which organisms (fauna and flora) normally live.
Habitats Directive	Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora
HDD	Horizontal Directional Drilling
HDPE	High Density Polyethylene
HGV	Heavy goods vehicle
HIA	Health Impact Assessment
HSE	Health Services Executive
HVAC	Heating, Ventilation and Air Conditioning
IAQM	Institute of Air Quality Management
ICE	Institute of Civil Engineers
ICPSS	Irish Coastal Protection Strategy Study
IE	Industrial Emissions Licence
IE	Intestinal enterococci
IED	Industrial Emissions Directive
IEMA	Institute of Environmental Management
IGI	Institute of Geologists Ireland
Interactive Effects	Likely significant effects arising from the interaction of different environmental factors that give rise to multiple effects on a single receptor
Intertidal	The area of shore that is exposed to the air at low tide and underwater at the high tide
IPPC	Integrated Pollution and Prevention Control

IROPI	Imperative Reasons for Overriding Public Interest
ISO	International Standards Organisation
$L_{Aeq T}$	The equivalent continuous sound level. It is an average and is used to describe a fluctuating noise in terms of a single noise level over the sample period (T).
$L_{Ar T}$	The rated noise level, equal to the $L_{Aeq}$ during a specified time interval (T), plus specified adjustments for tonal character and/or impulsiveness of the sound.
Lg	Local sand and gravel aquifer
LI	Local Zones
Lidar	A remote sensing technology that measures distance by illuminating a target with a laser and analysing the reflected light
m	metres
mOD	metres Above Ordnance Datum
MAND	Major Accidents and Natural disasters
MBR	Membrane Bioreactors
MEICA	Mechanical, Electrical, Instrumentation, Controls and Automation
MHWS	Mean High Water Springs – The highest level that spring tides reach on the average over a period of time
Mitigation	This is defined as measures which avoid or reduce environmental effects which are not included in the design of the proposed development or otherwise included ‘up front’ in the scheme description (such as the CoCP)
MMO	Marine Management Observer
Mt	Million tonnes
NDP	National Development Plan
NHA	National Heritage Area – An area considered by the NPWS important for the habitats present or which holds species of plants and animals whose habitat needs protection
Ni	Nickel
NIAH	National Inventory of Architectural Heritage
NIS	Natura Impact Statement
NO <sub>2</sub>	Nitrogen Dioxide
NTS	Non-technical summary
NPWS	National Parks and Wildlife Service
NPF	National Planning Framework
NRA	National Roads Authority
NSAI	National Standards Authority of Ireland

NSS	National Soil Survey
NVMP	Noise and Vibration Management Plan
NWSMP	National Wastewater Sludge Management Plan
OCU	Odour Control Unit
OD	Ordnance Datum
OPW	Office of Public Works
OHSAS	Occupational Health and Safety Assessment Series
OHSS	Occupational Hygiene and Safety Series
OS	Ordnance Survey
PCBs	Polychlorinated biphenyls
PCU	Passenger car units – One car is considered as a single passenger car unit (1 PCU), a motorcycle is considered as half a car unit (0.5 PCU). Buses and trucks (due to their large size) is considered equivalent to 3 cars (3 PCUs).
PE	Population Equivalent
PFRA	Preliminary Flood Risk Assessment
PID	Photo-ionisation detector
Pier	A column supporting the superstructure of a bridge
Planning boundary	The boundary for planning purposes of the project in question, i.e. the red line boundary as shown in Figure 1.1
PM	Particulate Matter
pNHA	Proposed Natural Heritage Area – An area identified by the NPWS on a non-statutory basis as sites of significance for wildlife and habitats
PO4	Orthophosphate
PPV	Peak particle velocity
Proposed development	The proposed Wastewater Treatment Plant and associated infrastructure including the interceptor sewer network, marine outfalls, upgrade to the revetment, Alps combined sewer overflow and stormwater storage tank.
Proposed Arklow Flood Relief Scheme	It is understood that Wicklow County Council funded by The Office of Public Works intends to undertake engineering works along the Avoca River to mitigate the risk of flooding in the Arklow and Ferrybank area in County Wicklow.
PSA	Preliminary Site Assessment
PSES	Public Sector Energy Efficiency Strategy
PV	Photovoltaics
RBC	Rotating Biological Contractors
RBMP	River Basin Management Plan
RDAS	Refurbishment / Demolition Asbestos Survey

Receptor	Something that could be adversely affected by the proposed development, such as people, an ecological system, property, water body or social infrastructure.
Rip-rap	Rock pieces 10-30 cm diameter used for scour protection of in-river works
RMP	Records of Monuments and Places
RPS	Records of Protected Structures
RQD	Rock Quality Description
RSES	Regional Assembly Spatial and Economic Strategy
SAC	Special Areas of Conservation - (including candidate SACs) protected under the provisions of the Habitats Directive
SBR	Sequencing Batch Reactor
Scour	Erosion of the riverbed due to water flows
SEA	Strategic Environmental Assessment
SI	Site investigation
SID	Strategic Infrastructure Development – Classified as such under the Seventh Schedule of the Planning and Development Act 2000, as amended including by the Planning and Development (Strategic Infrastructure) Act 2006.
Site	The entire area within the planning boundary for the proposed development
SMR	Sites and Monuments Record
Spring tide	The exceptionally high and low tides that occur at the time of the new moon or full moon when the sun, moon and earth are approximately aligned
SPA	Special Protection Area - (including proposed SPAs) protected under the provisions of the Birds Directive
SWO	Stormwater overflow – Relief valves within the network that allow excess combined storm water to be released to the storm water network, or directly to receiving waters (including rivers, lakes, estuarine or coastal waters).
T	Tonnes
TA	Total ammonia
TBM	Tunnel Boring Machine
TD	Téachta Dála – A TD is a member of Dáil Éireann, the lower house of the Oireachtas. It is the equivalent of terms such as ‘Member of Parliament’ or ‘Member of Congress’ used in other countries.
TDS	Total Dissolved Solids
TII	Transport Infrastructure Ireland
TSS	Total Suspended Solids

UMASW	Underwater Multichannel Analysis of Surface Waters
UPS	Uninterruptable power supply
UWWT Directive	Urban Wastewater Treatment Directive - Council Directive 91/271/EEC concerning urban waste-water treatment
WFD	Water Framework Directive – Council Directive 2000/60/EC establishing a framework for Community action in the field of water policy
WHO	World Health Organisation
WWDA	Wastewater Discharge Authorisation – Application made to and authorisation received from the EPA to discharge to aquatic environment as defined under Regulation 5 of the Waste Water Discharge Regulations 2007 (i.e. for an agglomeration with a population equivalent of more than 10,000 in the case of the proposed development)
WwTP	The proposed wastewater treatment plant that would be located at the Old Wallboard site, Ferrybank
WwTP site	The Old Wallboard site at Ferrybank where the proposed development would be constructed
WZ	Water-front Zone – Arklow’s Waterfront’ comprises the port, marinas, harbour, quays, north and south beaches and adjoining lands. The ‘Waterfront Zone’ is made of two district areas north and south of the river that have seen different development pressures and levels of activity over the year, but both sharing the common characteristics of water frontage onto the river and/or the sea and the presence of industrial lands / buildings, a large proportion of which is currently underutilised and vacant.