



PROJECT:

Castletroy Wastewater Treatment Plant Upgrade Project

REPORT:

Environmental Impact Assessment Volume 2: Main Report



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Glossary and Defined Terms

<u>Acronym/Term</u>	<u>Description</u>
µg	Microgram
°C	Degrees Celsius
AA	Appropriate Assessment
AADT	Annual Average Daily Traffic-the total volume of vehicle traffic of a motorway or road for a year divided by 365days
ABP	An Bord Pleanála
ACA	Architectural Conservation Area
AERMOD Model	Atmospheric dispersion model / Odour Dispersion Model -an advanced dispersion model based on the Gaussian theory of plume dispersion
AEP	Annual Exceedance Probability -the probability (expressed as a percentage) of a flood occurring in any given year that is equal to or more severe than a given magnitude or severity
AER	Annual Environmental Report
AGS	Aerobic Granular Sludge
am / AM	Before midday
AQS	Air Quality Standards
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 1700For the purposes of this report the terms 'architectural heritage' and 'built heritage' have the same intended meaning and are used interchangeably.
Baseline	Refers to existing conditions as represented by latest available survey and other data
Birds Directive	Council Directive 79/409/EECas amended by Council Directive 2009/147/EC on the conservation of wild birds
BOD	Biochemical Oxygen Demand
BPIP	Building Profile Input Program
BS	British Standard
BSI	British Standard Institution
CAFÉ	Clean Air for Europe Directive
c.	circa (approximately)
C&D	Construction and Demolition
CBOD	Carbonaceous Biological Oxygen Demand
CEMP	Construction Environmental Management Plan
CESSM	Civil Engineering Standard Method of Measurement
CFA	Continuous Flight Auger
CFRAM	Catchment Flood Risk Assessment and Management
CIRIA	Construction Industry Research and Information Association
CIWEM	Chartered Institution of Water and Environmental Management
Co.	County
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
COSHH	Control of Substances Hazardous to Health
County Development Plan	Limerick County Development Plan
Cultural Heritage	'Cultural Heritage' where used generically, is an over-arching term applied to describe any combination of archaeological, architectural and cultural heritage features. 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.
Decibel (dB)	The ratio of sound pressures, which we can hear, is a ratio of 10 ⁶ (one million: one). For convenience, therefore, a logarithmic measurement scale is used. The resulting parameter is called the 'sound pressure level' (L _p) 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
Discharge Licence	EPA Wastewater Discharge Licence for the WwTP.
DN	Do Nothing
DO	Dissolved Oxygen
DoEHLG	Department of the Environmental Heritage and Local Government
DoELG	Department of the Environment and Local Government. The Department is now the Department of Housing, Planning and Local Government
DS	Downstream
DWF	Dry Weather Flow
EC	European Commission
EEC	European Economic Community
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 Assessment
ELV	Emission Limit Value
EPA	Environmental Protection Agency
EPR	Environmental Permitting Regulations
ESB	Electrical Supply Board
ETS	Emission Trading Scheme
Estuary	Transitional area at the mouth of a river between freshwater and coastal waters.
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
FSR	Flood Studies Report
FST	Final Settling Tank
GDSDS	Greater Dublin Strategic Drainage Study
GE	General Electric
GHG	Greenhouse Gas

GI	Ground Investigation
GIS	Geographical Information System
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.
Habitat Directive	Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora
HDPE	High Density Polyethylene
HGV	Heavy Goods Vehicle
Hz	Hertz
IAQM	Institute of Air Quality Management
IEL	Industrial Emission Licence
IE	Intestinal Enterococci
IEMA	Institute of Environment Management
IFAS	Integrated Fixed-Film Activated Sludge
IROPI	Imperative Reasons for Overriding Public Interest
ISO	International Standards Organisation
ITM	Irish Transverse Mercator
IW	Irish Water acronym still used on documents that precede change of entity to Uisce Éireann
JBA	Jeremy Benn Associates
JBB	J. B. Barry and Partners
LCA	Landscape Character Area
LA10	Sound level that is exceeded for 10% of the sample period
LAeq	Equivalent continuous A-weighted sound pressure level
LAeqT	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)
Lg	Local sand and gravel aquifer
LI	Local Zones
LV	Light Vehicles
m	metres
mOD	metres Above Ordnance Datum
MBR	Membrane Bioreactors
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)
Mt	Million tonnes
NHA	National Heritage Area
NIAH	National Inventory of Architectural Heritage
NIS	Natura Impact Statement
NPF	National Planning Framework
NPWS	National Park and Wildlife Services
NSO	National Strategic Outcomes
NSS	National Spatial Strategy
NWSMP	National Wastewater Sludge Management Plan
OCU	Odour Control Unit
OD	Ordnance Datum

OHSAS	Occupational Health and Safety Assessment Series
OMP	Odour Management Plan
OPW	Office of Public Works
OSEMP	Operational Stage Environmental Management Plan
OSI	Ordnance Survey Ireland
PCU	<p>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).</p> <p>Population Equivalent: The amount of wastewater received at a treatment plant (and its design capacity) is measured in units known as population equivalent (or PE). The wastewater received from all sources, e.g. industrial, tourism, commercial, residential, etc., is converted into these units, with one unit of PE representing the wastewater treatment load typically generated by a single person.</p>
PE	
PFT	Picket Fence Thickener
Planning Boundary	The boundary for planning purposes of the project in question, i.e. the red line boundary
PM	Particulate Matter
PM10	Particulate Matter < 10 µm
PM2.5	Particulate Matter < 2.5 µm
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.
PS	Pump Station
RAS	Return Activated Sludge
RBC	Rotating Biological Contractors
RBC	River Basin Management Plan
Receptor	Something that could be adversely affected by the proposed development, such as people, an ecological system, property, water body or social infrastructure.
RFC	Ratio of flow to Capacity
RPO	Regional Policy Objective
RPS	Records of Protected Structures
RSES	Regional Spatial and Economic Strategy
SAC	Special Area of Conservation
SAS	Surplus Activated Sludge
SBR	Sequencing Batch Reactor
SCADA	Supervisory Control And Data Acquisition
Scour	Strategic Environmental Assessment
Seveso	The 'Seveso' Directive applies to around 10,000 industrial establishments across Europe where dangerous substances are used or stored in large quantities, mainly in the chemicals, petrochemicals, storage, and metal refining sectors
SI	Site Investigation
SID	Strategic Infrastructure Development
Site	The entire area within the planning boundary for the proposed development
Sludge	Solid by-products of wastewater
SPA	Special Protection Area
SS	Suspended Solids
SUDS	Sustainable Drainage System

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
TGN	Technical Guidance Note
TII	Transport Infrastructure Ireland
TRL	Transport Research Laboratory
TSS	Total Suspended Solids
TSST	Thickened Sludge Storage Tank
Uisce Éireann	Ireland’s Water Authority, formerly known as Irish Water
UL	University of Limerick
WFD	Water Framework Directive
WWDA	Wastewater Discharge Authorisation–Application made to and authorisation received from the EPA to discharge to aquatic environments 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)
WWDL	Wastewater Discharge Licence
WwTP	Wastewater Treatment Plant
WYG	White Young Green
ZTV	Zone of Theoretical Visibility

Preface

The structure of the Environmental Impact Assessment Report (EIAR) for the proposed Castletroy Wastewater Treatment Plant Upgrade Project (the Proposed Development) is outlined in the preface at the start of each Volume of the EIAR for clarity. The volumes and sub-section titles are summarised as follows:

Volume 1: Non-Technical Summary

Volume 1 provides a non-technical summary of the information contained in Volume 2.

Volume 2: Main Report

Volume 2 contains the main EIA Report. Sections 1 to 5 provide a general introduction, an outline of the EIA and other legislative process, considerations of alternatives, and a description of the Proposed Development.

Sections 6 to 20 describe the environmental impacts, an assessment of potential cumulative effects and interactions, and a summary of mitigation measures specific to the Proposed Development .

Volume 3: Appendices

Volume 3 provides documentation and data that is supplemental to the information provided in Volume 2 of the EIAR.

Volume 4: Drawings

Volume 4 provides project drawings in A3 format that illustrate the information detailed in Volume 2 of the EIAR.