



Dublin Airport Underpass

Environmental Impact Assessment Report
Volume 3 - Figures

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 DublinAirport

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Glossary

Abbreviation / Term	Definition
%	Percentage
µg/m ³	Microgram per cubic meter
µm	Micro-metre. A measure of length equalling 1x10 ⁻⁶ of a metre
AA	Appropriate Assessment
ABP	An Bord Pleanála
Abstraction	Groundwater abstraction is the process of taking water from a ground source, either temporarily or permanently. In many aquifers the groundwater has to be pumped out through boreholes or wells. As water is abstracted the water table is lowered around the borehole. If rates of abstraction exceed rates of groundwater recharge within an aquifer, the water table can fall across a wide area.
ACA	Architectural Conservation Area
ANCA	Aircraft Noise Competent Authority
ANPR	Automatic Number Plate Registration
APU	Auxiliary Power Units
AQLV	Air Quality Limit Values
ATM	Air Traffic Movement
ASI	Archaeological Survey of Ireland
ACDM	Airport Collaborative Decision Making
Baseflow	Groundwater flow to a surface water body (lake, swamp, or stream); i.e., that portion of stream discharge that is derived from groundwater flow or the draining of large lakes swamps or other sources outside the net rainfall that creates surface runoff/overland flow.
BCT	Bat Conservation Trust
BGL	Below Ground Level
BNL	Basic Noise Level
BSI	British Standards Institute
CAR	Commission for Aviation Regulation
CAFE	Cleaner Air for Europe
CCD	Climb, Cruise and Descent
CCR	Climate Change Resilience
CEMP	Construction Environmental Management Plan
CFRAM	Catchment Flood Risk Assessment and Management
CGI	Computer Generated Imagery
CHD	Coronary Heart Disease
CH ₄	Methane
CIEEM	Chartered Institute of Ecology and Environmental Management
CIRIA	Construction Industry Research and Information Association
CO	Carbon Monoxide
COD	Chemical Oxygen Demand

Abbreviation / Term	Definition
CODA	Central Office of Delay Analysis
CO ₂	Carbon Dioxide
COMAR	Control of Major Accident Hazard
CSO	Central Statistics Office
CD	Cardiovascular Disease
C ₆ H ₆	Benzene
DAA	Dublin Airport Authority
dB	The unit of noise measurement that expresses the loudness in terms of decibels (dB) based on a weighting factor for humans sensitivity to sound (A)
dB(A)	The unit of sound level, weighted according to the A-scale, which takes into account the increased sensitivity of the human ear at some frequencies
DBA	Desk-Based Assessment
DCHG	Department of Culture, Heritage and the Gaeltacht
DCLG	Department of Communities and Local Government
DECC	Department of Energy and Climate Change (UK)
Defra	Department for Environment, Food and Rural Affairs (UK)
DfT	Department for Transport (UK)
DoEHLG	Department of Transport and the Department of Environment, Heritage and Local Government
DRAQMP	Dublin Regional Air Quality Management Plan
DTTAS	Department of Transport, Tourism and Sport
DUB	Dublin
EASA	European Aviation Safety Agency
EC	European Commission
ED	Electoral Divisions
EIA	Environmental Impact Assessment.
EIAR	Environmental Impact Assessment Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPS	European Protected Species
EPUK	Environmental Protection UK
ETS	Emission Trading Scheme
EU	European Union
FAA	Federal Aviation Administration (US)
FDI	Foreign Direct Investment
FEGP	Fixed Electrical Ground Power
FCC	Fingal County Council
FRA	Flood Risk Assessment
Fracture	A fracture is any separation in a geologic formation, such as a joint or a fault that divides the rock into two or more pieces. A fracture will sometimes form a deep fissure or crevice in the rock.

Abbreviation / Term	Definition
NFTMS	Flight Track Monitoring System
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GLVIA	Guidelines for Landscape and Visual Impact Assessment
Groundwater ingress (infiltration)	The process of seeping rainwater and water from other sources into the ground to form groundwater is called infiltration. Infiltration refills the groundwater. Aquifer: Rainwater and water from rivers, ponds seep through the soil and fill the gaps between particles of soil and rocks.
Groundwater flow path	Groundwater flow means the volume and direction of groundwater through an aquifer. Groundwater flows from regions of higher hydraulic level to regions of lower hydraulic level.
Groundwater recharge	The process by which water enters the groundwater system or, more precisely, enters the phreatic zone.
GSE	Ground Support Equipment
ha	Hectare
HFCs	Hydrofluorocarbons
HIA	Health Impact Assessment
HSA	Health and Safety Authority
HSE	Health and Safety Executive
HT	High Technology
Hydraulic continuity	The relationship between ground water (within the superficial deposits or bedrock aquifer) and surface water (Rivers, lakes and streams). The relationship depends on whether groundwater discharges to surface water (referred to as baseflow); or where surface water discharges to ground water, such as from riverbed seepage to an adjacent aquifer.
IAA	Irish Aviation Authority
IAI	Institute of Archaeologists Ireland
IAQM	Institute of Air Quality Management
ICAO	International Civil Aviation Organisation
ICE	Inventory of Carbon and Energy
ICCI	In-combination Climate Change Impact Assessment
IEMA	Institute of Environmental Management and Assessment
IFC	International Finance Corporation
IFI	Inland Fisheries Ireland
IGI	Institute of Geologists of Ireland
IHD	Ischaemic Heart Disease
IHT	Institution of Highways and Transportation
IPC	Integrated Pollution Control
IPPC	Intergovernmental Panel on Climate Change
ISO	International Organisation for Standardisation
IW	Irish Water
JA	Jobseekers Allowance
JB	Jobseekers Benefit

Abbreviation / Term	Definition
km	Kilometres
LAP	Local Area Plan
LAQM	Local Air Quality Management.
Ltd.	Limited
LTO	Landing and Take-off
mppa	Million Passengers Per Annum
NAP	National Aviation Policy
N/A	'Not applicable' or 'Not appropriate'
NDP	The National Development Plan 2018 – 2027
NF ₃	Nitrogen Trifluoride
NIAH	National Inventory of Architectural Heritage
NIS	Natura Impact Statement
NLS	National Landscape Strategy
NMS	National Monument Service
NMTs	Noise Monitoring Terminals
NO ₂	Nitrogen Dioxide
NOEL	No Observed Effect Level
NO _x	Nitrogen Oxides
NPPF	National Planning Policy Framework. (UK)
NPF	National Planning Framework
NPPG	National Planning Policy Guidance (UK)
NPWS	National Parks and Wildlife Services
NQP	Night Quota Period
NRA	National Roads Authority
NSO	National Strategic Outcomes
NSS	National Spatial Strategy
NTA	National Transport Authority
NTS	Non-Technical Summary
N ₂ O	Nitrous Oxide
O-D	Origin-Destination
OPW	Office of Public Works
OS	Ordnance Survey
OSI	Ordnance Survey Ireland
Outcrop	Where a bedrock formation is present at the surface.
Overburden	Any material that lies above bedrock geology commonly referred to as superficial deposits.
PAX	Annual Passengers
PDA	Planning and Development Acts
Permeability	The ease with which a porous medium can transmit water or other fluids.
PFCs	Perfluorocarbons

Abbreviation / Term	Definition
PM ₁₀	Particulate Matter
PM _{2.5}	Particulate Matter
PWHT	Polluted Water Holding Tank
QC	Quota Count
QI	Qualifying Interest
RMP	Record of Monument and Places
RMSE	Root Mean Square Error
RoI	Republic of Ireland
RPS	Record of Protected Structures
RSES	Regional Spatial and Economic Strategy
PSZ	Public Safety Zones
SA	Small Areas
SAC	Special Area of Conservation
SCI	Special Conservation Interests
SEAI	Sustainable Energy Authority of Ireland
SF ₆	Sulphur Hexafluoride
SI	Statutory Instrument
SID	Standard Instrument Departure
SO ₂	Sulphur Dioxide
SPA	Special Protected Area
SRI	Societal Risk Index
SSSI	Site of Special Scientific Interest
TFS	Trans Frontier Shipping
TII	Transport Infrastructure Ireland
Till deposits	Till is an unsorted sediment derived from the transportation and deposition of by or from a glacier. Glacial till is composed of a heterogeneous mixture of clay, sand, gravel and boulders.
TOC	Total Organic Carbon
TTA	Traffic and Transport Assessment
UK	United Kingdom
UV	Ultraviolet
VOC	Volatile Organic Compounds
Weathering	Weathering is the breaking down or dissolving of rocks in surface
WFD	Water Framework Directive
WHO	World Health Organisation
ZOI	Zone of Influence

Key Concepts and Terminology Used in the EIAR

Proposed Development

The **Proposed Development** consists of four key elements:

- A subterranean Underpass of Runway 16/34 including ramps and portals, plantroom, and all attendant access roads at surface level to tie in with the existing airside road network
- Relocation of aircraft stands at Pier 3 to accommodate access roads to serve the Underpass. Works include introduction of new nodes, fixed links and airbridges, to provide access to the relocated stands, while accommodating the Underpass footprint where it interacts with existing apron and aircraft stands.
- Modifications to Pier 3 Fixed Links and Airbridges to accommodate necessary road modifications, to ensure safe and efficient passenger access to aircraft stands
- Drainage works including temporary diversion of the Cuckoo Culvert and local attenuation

as described in Chapter 1 ('Introduction') and Chapter 3 ('Proposed Development') in this EIAR.

In addition, the **Proposed Development** includes two ancillary elements: six inert pipelines which will form part of the **Future Drainage Network** at Dublin Airport and three construction compounds. These are also described in Chapter 3 ('Proposed Development').

Underpass

The **Underpass** is that part of the **Proposed Development** linking the Eastern Campus of the airport with the Western Campus, including ramps and portals, plantroom, and all attendant access roads at surface level.

Future Drainage Network

This is the planned set of interventions to upgrade and partially replace the existing drainage network at Dublin Airport with new infrastructure designed to enhance the environmental performance of the drainage network. It does not form part of the **Proposed Development**, except as noted above, and will be the subject of a separate application for planning permission.

Current State of the Environment

This is the description of the current environmental conditions, as required by the EIA Directive 2011/92/EU (as amended by Directive 2014/52/EU). It is determined through desk-study and surveys undertaken between 2018 and 2021, as detailed in the technical chapters that cover the effects on environmental factors.

Future Receiving Environment

The **Future Receiving Environment** is the predicted state of the environment in two **Assessment Years** (2024 and 2025) and represents the likely evolution of the **Current State of the Environment** without implementation of the **Proposed Development**. It is also used as the baseline environment against which the assessment of effects is undertaken. It is derived from the **Current State of the Environment**, adjusted to reflect likely changes occurring between now and the assessment years (insofar as it is possible to determine these).

This is in line with the Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EPA, 2022) which explain that the predicted future baseline may be referred to as the likely future receiving environment.

Assessment of Effects

The effects of the **Proposed Development** are identified by examining their predicted impacts on the **Future Receiving Environment**.

Assessment Year(s)

The **Assessment Years** are the points in time at which the likely significant effects of the **Proposed Development** are assessed. The reasons for selecting these years are given below.

- **2024**: the likely peak year of environmental effects from construction of the **Proposed Development**.
- **2025**: the likely opening year of the **Proposed Development**.

32 million passengers per annum (mppa) Cap (32 mppa Cap)

Cap on the permitted annual passenger capacity of the Terminals at Dublin Airport as a result condition no. 3 of the **Terminal 2 Planning Permission** and condition no. 2 of the **Terminal 1 Extension Planning Permission**. These conditions provide that the combined capacity of Terminal 1 and Terminal 2 together shall not exceed 32 million passengers per annum.

Terminal 1 Extension Planning Permission

The **Terminal 1 Extension Planning Permission** is the planning application FCC Reg. Ref. No. F06A/1843, ABP Ref. PL06F. 223469 granted on the 10th January 2008 by An Bord Pleanála.

Terminal 2 Planning Permission

The **Terminal 2 Planning Permission** is the planning application FCC Reg. Ref. No. F06A/1248, ABP Ref. PL06F.220670 granted on the 29th August 2007 by An Bord Pleanála.