

**BusConnects Galway:
Dublin Road**

January 2025

**Environmental
Impact
Assessment
Report**

Volume 2
Main Chapters



SUSTAINABLE TRANSPORT FOR A BETTER CITY.

Preface

The structure of this Environmental Impact Assessment Report (EIAR) for the BusConnects Galway: Dublin Road (hereafter referred to as the Proposed Development) is summarised as follows:

Volume 1: Non-Technical Summary

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

Volume 2: Main Environmental Impact Assessment Report

Volume 2 provides a general introduction, outlines the environmental impact assessment process, describes the scope of the Proposed Development, presents the consideration of reasonable alternatives and describes the environmental impacts specific to the Proposed Development.

Volume 3: Figures

Volume 3 provides drawings and large format images (labelled as ‘Figures’) that illustrate the information detailed in Volume 2 of the EIAR.

Volume 4: Appendices

Volume 4 provides documentation and data that is supplemental to the information provided in Volume 2 of the EIAR.

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Glossary of Terminology, Abbreviations and Acronyms

Term, Abbreviation or Acronym	Description
AA	Appropriate Assessment
AADT	Annual Average Daily Traffic
AAS	Appropriate Assessment Screening
ABP	An Bord Pleanála
AEP	Annual Exceedance Probability
AMOC	Atlantic Meridional Overturning Circulation
Annex I Habitats	Habitat types whose conservation requires the designation of Special Areas of Conservation. Priority habitats, which are in danger of disappearing within the EU territory, are highlighted with an asterisk.
Annex I Species	Annex I of the Birds Directive lists 193 bird species and sub-species which are: i) in danger of extinction, ii) vulnerable to specific changes in their habitat, iii) considered rare because of small populations or restricted local distribution and / or iv) require particular attention for reasons of the specific nature of habitat. Article 4 of the Birds Directive has classified a number of Special Protection Areas (SPAs) for regularly occurring migratory birds and those birds listed on Annex I of the directive.
Annex II Species	Animal and plant species whose conservation requires the designation of Special Areas of Conservation.
Annex IV	Animal and plant species in need of strict protection.
Annex V	Animal and plant species whose taking in the wild and exploitation may be subject to management measures.
ANS	Active Nest Sites
AOD	Above Ordnance Datum
AQG	Air Quality Guideline
ASI	Archaeological Survey of Ireland
ASR	Air sensitive receptor
ATCs	Automatic Traffic Counts
ATU	Atlantic Technological University
AVL	Automatic Vehicle Location
BCT	Bat Conservation Trust
Birds of Conservation Concern in Ireland	BirdWatch Ireland and the Royal Society for the Protection of Birds (RSPB) in Northern Ireland provided a list of priority bird species for conservation action on the island of Ireland. These Birds of Conservation Concern in Ireland are published in a list known as the BoCCI List. In this BoCCI List, birds which breed and / or winter in Ireland are classified into three separate lists (Red, Amber and Green), based on the conservation status of the bird and hence conservation priority.
BminDW	Deep well drained mineral soil (mainly basic)
BminPDPT	Peaty gleys basic parent materials basic

Term, Abbreviation or Acronym	Description
BMW	Biodegradable Municipal Waste
BoCCI	Birds of Conservation Concern in Ireland
BRE	Building Research Establishment Group
BRT	Bus Rapid Transit
BS	British Standard
BSBI	Botanical Society of Britain and Ireland
BSI	British Standard Institute
BT	Barry Transportation - Egis
BusConnects Galway – Cross City Link	The BusConnects Galway – Cross City Link is the works for Galway which is from University Road to Dublin Road (Proposed Development).
Bus Gate	A Bus Gate is a sign-posted short length of stand-alone bus lane. This short length of road is restricted exclusively to buses, taxis and cyclists plus emergency vehicles. It facilitates bus priority by removing general through traffic along the overall road where the bus gate is located. General traffic will be directed by signage to divert away to other roads before they arrive at the Bus Gate.
Bus Lane	An on-road carriageway reserved primarily for the use of buses. A bus lane forms part of a road link and it is located within the contiguous road surface.
BWI	BirdWatch Ireland
CA	Conservation Area
Ca	Calcium
CAP	Climate Action Plan
Catchment	The area of land bounded by watersheds draining into a river, basin or reservoir.
CBA	Cost Benefit Analysis
CBC	Core Bus Corridor
CC	Construction Compound
CCTV	Close-circuit television
CCRA	Climate Change Risk Assessment
CDP	County Development Plan
CDRWMP	Construction and Demolition Resource and Waste Management Plan
CEA	Cumulative Effects Assessment
CEMP	Construction Environmental Management Plan
CERC	Cambridge Environmental Research Consultants
CESMM4	Civil Engineering Standard Method of Measurement 4
CGS	County Geological Sites
CH	Cultural Heritage
CH ₄	Methane
CIEEM	Chartered Institute of Ecology and Environmental Management
CIRIA	Construction Industry Research and Information Association

Term, Abbreviation or Acronym	Description
CNL	Construction Noise Levels
CNT	Construction Noise Threshold
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COMAH	Control of Major Accident Hazards Involving Dangerous Substances
Construction Phase	The processes and activities on or off site that contribute or are instrumental to the construction of the Proposed Development towards, and finally to, the Operational Phase.
Construction Year (2026)	For the purposes of modelling, a Construction Year of 2026 is assumed.
CORINE	Co-ordinated Information on the Environment
CPO	Compulsory Purchase Order
CRTN	Calculation of Road Traffic Noise
cSAC	Candidate Special Area of Conservation
cSPA	candidate Special Protection Areas
CSM	Conceptual Site Model
CSMMP	Construction Stage Mobility Management Plan
CSO	Central Statistics Office
CTMP	Construction Traffic Management Plan
CUWR	Connacht Ulster Waste Region
Cycle Lane	A cycle lane is a lane on the carriageway that is reserved either exclusively or primarily for cycling and is separated from general traffic or bus lanes by road markings.
Cycle Track	A cycle track is a separate section of the road dedicated for cycling only. This space will generally be isolated from other vehicular traffic by a physical kerb.
DAHG	Department of Arts, Heritage and the Gaeltacht
DAU	Development Applications Unit
dB	Decibel
DECC	Department of Environment, Climate and Communications
DCHG	Department of Culture, Heritage and the Gaeltacht
DEHLG	Department of the Environment, Health and Local Government.
Designated sites	Selected sites designated with the aim to conserve habitats and species of conservation concern.
Design Year (2043)	For the purposes of modelling, a Design Year of 2043 is assumed.
DHLGH	Department of Housing, Local Government and Heritage
DHPLG	Department of Housing, Planning and Local Government
DM	Do Minimum
DMURS	Design Manual for Urban Roads and Streets
DN	Do Nothing
DoT	Department of Transport

Term, Abbreviation or Acronym	Description
DS	Do Something
DTTS	Department of Transport, Tourism and Sport
EC	European Commission
ED	Electoral Division
EIA	Environmental Impact Assessment – refers to the assessment process and the assessment that An Bord Pleanála will carry out.
EIAR	Environmental Impact Assessment Report – refers to the EIA report document.
EIRP	Environmental Incident Response Plan
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPR	Emerging Preferred Route
EQS	Environmental Quality Standard
ESB	Electricity Supply Board
ESRI	Environmental Systems Research Institute
ETS	Emission Trading Scheme
EU	European Union
EUPHA	European Public Health Association
FRA	Flood Risk Assessment
FRM	Flood Risk Management
GAA	Galic Athletic Association
GCC	Galway City Council
GCDP	Galway City Council Development Plan 2023-2029
GEP	Good Ecological Potential
GHG	Greenhouse Gas
GI	Ground Investigation
GIS	Geographic Information System
GLC	Ground level concentrations
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GNI	Gas Networks Ireland
GPR	Ground Penetrating Radar
GPRS	Galway Public Realm Strategy
GPS	Global Positioning System
GSI	Geological Survey Ireland
GTS	Galway Transport Strategy
GWB	Groundwater Bodies
GWP	Global Warming Potential
ha	Hectares

Term, Abbreviation or Acronym	Description
HA	Hydrometric Area
HGV	Heavy Goods Vehicle
HIA	Health Impact Assessment
HLC	Historic Landscape Character
HSA	Health and Safety Authority
HSE	Health Service Executive
Hydromorphology	Hydromorphology is a term used in river basin management to describe the hydrological (water flow, energy etc.) and geomorphological (surface features) processes and attributes of rivers, lakes, estuaries and coastal waters.
Hz	Hertz
IAIA	International Association for Impact Assessment
IAQM	Institute of Air Quality Management
ICE	Institution of Civil Engineers
ICOMOS	International Council of Monuments and Sites
IEL	Industrial Emissions License
IEMA	Institute of Environmental Management and Assessment
IES	Institute of Environmental Sciences
IFI	Inland Fisheries Ireland
IGI	Institute of Geologists of Ireland
Invasive species	An invasive species is a plant, fungus, or animal species that is not native to a specific location.
IPC	Integrated Pollution Control
IPCC	Intergovernmental Panel on Climate Change
ISMP	Invasive Species Management Plan
IOA	Institute of Acoustics
ISO	International Organization for Standardization
ITM	Irish Transverse Mercator
JTCs	Junction Turning Counts
KER	Key Ecological Receptors – Ecological receptors include any living organisms (other than humans), the habitat which supports such organisms, or natural resources which could be adversely affected by the Proposed Development
KFPA	Kerbs, Footway and Pavement Area
km	Kilometre
kt	Kilotonnes
LAM	Local Area Model
LAQM	Local Air Quality Management
LAP	Local Area Plan

Term, Abbreviation or Acronym	Description
LAeq,T	The equivalent continuous sound level. It is a type of average and is used to describe a fluctuating noise in terms of a single noise level over the sample period (T).
LCA	Landscape Character Assessment
LDV	Light Duty Vehicle
LED	Light Emitting Diode
LGV	Light Goods Vehicle
LoW	List of Waste
LoS	Level of Service
LRD	Large-scale Residential Development
LVIA	Landscape and Visual Impact Assessment
LULUCF	Land Use, Land-use Change and Forestry
m	Metres
MAD	Major Accidents and Disaster
MASP	Metropolitan Area Strategic Plan
MCA	Multi-Criteria Analysis
MSW	Municipal Solid Waste
Mt	Million Tonnes
NAF	National Adaptation Framework
NAP	Noise Action Plan
Natura Impact Statement	Statement for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites prepared to enable the carrying out by the competent authority of an Appropriate Assessment as required under the Habitats Directive.
NBDC	National Biodiversity Data Centre
NCCRA	National Climate Change Risk Assessment
NCM	National Cycle Manual
NCCAF	National Climate Change Adaption Framework
NDA	National Disability Authority
NDP	National Development Plan
NFCS	National Framework for Climate Services
NHA	Natural Heritage Area
NIAH	National Inventory of Architectural Heritage
NIFTI	National Investment Framework for Transport in Ireland
NIS	Natura Impact Statement
NMI	National Museum of Ireland
NMS	National Monuments Service
NMVOC	Non-Methane Volatile Organic Compound

Term, Abbreviation or Acronym	Description
NO _x	Nitrogen Oxides
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
N ₂ O	Nitrous Oxide
NPF	National Planning Framework
NPWS	National Parks and Wildlife Services
NRA	National Roads Authority
NSLs	Noise Sensitive Locations
NTA	National Transport Authority
Opening Year (2028)	For the purposes of modelling, an Opening Year of 2028 is assumed
Operational Phase	This phrase refers to the processes and activities implemented following the Construction Phase to ensure the appropriate environmental management of the Proposed Development over time.
OPW	Office of Public Works
OS	Ordnance Survey
OSI	Ordnance Survey Ireland
PM	Particulate matter
PM _{2.5}	Particulate matter of less than 2.5 microns
PM ₁₀	Particulate matter of less than 10 microns
pNHA	Proposed Natural Heritage Area
PNS	Potential Nest Sites
PPE	Personal Protective Equipment
PPV	Peak Particle Velocity
PRO	Preferred Route Option – this is the route option chosen, and the subject of the EIA.
PRFs	Potential Roost Features
Proposed Development	BusConnects Galway: Dublin Road
Rck	Bedrock outcrop or subcrop
QI	Qualifying Interest
QoS	Quality of Service
RBD	River Basin District
RBMP	River Basin Management Plan
REM	Roads Emissions Model
RMAD	Risk of Major Accidents and Disasters
RMP	Record of Monuments and Places
RPA	Root Protection Area
RPS	Record of Protected Structures
RSA	Road Safety Authority
RSES	Regional Spatial and Economic Strategy

Term, Abbreviation or Acronym	Description
RTPI	Real-time Passenger Information
SAC	Special Area of Conservation
SCI	Special Conservation Interest
SCP	Sediment Control Plan
SDG	Sustainable Development Goal
SEAI	Sustainable Energy Authority Ireland
SHD	Strategic Housing Development
SID	Strategic Infrastructure Developments
SMR	Sites and Monuments Record
SO ₂	Sulphur dioxide
SPA	Special Protection Area
SuDS	Sustainable Drainage Systems
SWMP	Surface Water Management Plan
SWO	Storm Water Overflow
TCA	Townscape Character Assessment
The Birds Directive	The Birds Directive (formally known as Council Directive 2009/147/EC on the conservation of wild birds) is a European Union directive adopted in 2009. It replaces Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds. It aims to protect all European wild birds and the habitats of listed species, in particular through the designation of Special Protection Areas.
The Habitats Directive	EU Directive on the Conservation of Habitats, Flora and Fauna (92/43/EEC), commonly known as “the Habitats Directive”, was adopted in 1992, came into force in 1994 and was transposed into Irish law in 1997.
TIA	Transport Infrastructure Assessment
TII	Transport Infrastructure Ireland
TLs	Till derived from limestones
Toucan Crossing	A Toucan Crossing is a roadway crossing designed to enable both pedestrians and cyclists to cross the road with purposefully designed signal controls.
TPO	Tree Preservation Order
TSM	Traffic Signs Manual
UK	United Kingdom
UKEA	United Kingdom Environment Agency
UKHE	United Kingdom Highways England
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change

Term, Abbreviation or Acronym	Description
Urban Realm	Urban Realm is the term for everyday street spaces that are used by the public to cross, shop, socialise, play and use for activities including walking, exercising and commuting.
US	United States
UV	Ultra Violet
UWWTP	Urban Wastewater Treatment Plant
VDV	Vibration Dose Value
VOCs	Volatile Organic Compound
VSLs	Vibration Sensitive Locations
WEEE	Waste Electrical and Electronic Equipment
WFD	Water Framework Directive
WHO	World Health Organization
WRM	Western Regional Model
WWTP	Wastewater Treatment Plant
ZAP	Zone of Archaeological Potential
ZoI	Zone of Influence
ZoN	Zone of Notification
µg / m ³	Micrograms per cubic metre



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Project Ireland 2040
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