APPROPRIATE ASSESSMENT

CONCLUSION STATEMENT

FOR THE

INTEGRATED IMPLEMENTATION PLAN 2019-2024

for: National Transport Authority Dún Scéine Iveagh Court Harcourt Lane Dublin 2



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Table of Contents

Section	1 Introduction and Background1
1.1	Introduction
1.2	Legislative Requirements in relation to AA
1.3	AA Conclusion Statement
Section	2 How the findings of the AA were factored into the Plan 2
Section	3 Consideration of Alternatives
3.1	Summary of Alternatives Considered
3.2	Summary of Evaluation of Alternatives
3.3	Reasons for choosing the selected alternative in light of other alternatives considered 10
Section	4 AA Determination

List of Tables

Table 1.1 Matters taken into account by the AA	1
Table 2.1 SEA/AA recommendations that have been included within the Plan	
Table 2.2 Provisions referred to in Integrated Transport Plan sub-section 4.5.7 "O	
Recommendations"	

Section 1 Introduction and Background

1.1 Introduction

This is the Appropriate Assessment (AA) Conclusion Statement for the Integrated Implementation Plan 2019-2024. The obligation to undertake AA derives from Article 6(3) and 6(4) of the Habitats Directive 92/43/EEC as transposed into Irish legislation by, inter alia, the European Communities (Birds and Natural Habitats) Regulations 2011, as amended. AA is a focused and detailed impact assessment of the implications of a strategic action (such as a plan or programme) or project, alone and in combination with other strategic actions and projects, on the integrity of any European Site in view of its conservation objectives. This AA Conclusion Statement should be read in conjunction with the Plan and associated documents including the AA Natura Impact Report (NIR)¹.

1.2 Legislative Requirements in relation to AA

In carrying out the AA for the Plan, Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), as amended, requires, inter alia, that the Authority considers the matters arrayed in the first column on Table 1.1 below. The second column identifies how these issues have been addressed.

Matter specified by the Regulations	How addressed by AA
(a) the Natura Impact Statement	An AA NIR accompanies this AA Conclusion Statement and the Plan
(b) any other plans or projects that may, in combination with the plan or project under consideration, adversely affect the integrity of a European Site (see Section 2)	Throughout the AA NIR, particularly Sections 2.4 and 3.4 of the NIR.
(c) any supplemental information furnished in relation to any such report or statement	This AA Conclusion Statement supplements the NIR that provides additional detail on European Sites.
(d) if appropriate, any additional information sought by the authority and furnished by the applicant in relation to a Natura Impact Report	The AA process and the accompanying Strategic Environmental Assessment process have taken into account submissions received during the Plan/AA-preparation
(e) any information or advice obtained by the public authority	process – see Section 2 of this Statement.
(f) if appropriate, any written submissions or observations made to the public authority in relation to the application for consent for proposed plan or project	
(g) any other relevant information	

Table 1.1 Matters taken into account by the AA

In addition to the above, the Regulations require that the Authority makes available for inspection a determination regarding the outcome of the assessment with respect to whether or not the Plan would adversely affect the integrity of a European site (a copy of this determination is provided at Section 4).

1.3 AA Conclusion Statement

Non-Statutory AA guidance (Department of Environment, Heritage and Local Government, 2009) states that (Section 4.14) it *"is recommended that planning authorities include a clear and discrete AA Conclusion Statement as a distinct section in the written statement of the plan separate to the SEA statement."* This guidance recommends that the following issues are addressed by this Statement:

- Summary of how the findings of the AA were factored into the Plan (see Section 2);
- Reasons for choosing the Plan as adopted, in the light of other reasonable alternatives considered as part of the AA process (see Section 3);
- A declaration that the Plan as adopted will not have an adverse effect on the integrity of European Sites (provided at Section 4); and
- The NIR (the AA NIR is accompanied by this AA Conclusion Statement and has informed the AA Determination see Section 4).

As recommended, this AA Conclusion Statement addresses the above issues.

¹ Also referred to as Natura Impact Statement

Section 2 How the findings of the AA were factored into the Plan

Various environmental sensitivities and issues have been communicated to the Authority through the Strategic Environmental Assessment (SEA) and the AA. By integrating all related recommendations into the Plan, the Authority have ensured that both the beneficial environmental effects of implementing the Plan have been and will be maximised and that potential adverse effects have been and will be avoided, reduced or offset. Integration of AA considerations into the Plan was achieved including through the integration of AA-related provisions into the Plan. AA related changes to the Plan which have been brought about by the SEA and AA processes are detailed in Table 2.1 and Table 2.2 below.

Plan Chapter No.	Text inserted into the Plan arising from SEA/AA processes
Chapter 2 Background to the Implementation Plan, Sub-section 2.3 Spatial Planning	Any future Transportation Strategies for these Metropolitan Areas will be required to be subject to SEA and AA as appropriate.
Chapter 4 Overall Infrastructure Investment Programme, Sub-section 4.5 Environmental considerations	4.5.1 Regulatory Framework for Environmental Protection and Management In implementing this Plan, the Authority will cumulatively contribute towards – in combination with other users and bodies – the achievement of the objectives of the regulatory framework for environmental protection and management, in compliance with EU Directives - including the Habitats Directive (92/43/EEC, as amended), the Birds Directive (2009/147/EC), the Environmental Impact Assessment Directive (2011/92/EU, as amended by 2014/52/EC) and the Strategic Environmental Assessment Directive (2001/42/EC) – and relevant transposing Regulations.
Chapter 4 Overall Infrastructure Investment Programme, Sub-section 4.5 Environmental considerations	 4.5.2 Lower-level Decision Making Lower levels of decision making and environmental assessment should consider the sensitivities identified in Section 4 of the SEA Environmental Report, including the following: Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) and Candidate SACs and SPAs; Features of the landscape that provide linkages/connectivity to designated sites (e.g. watercourses, areas of semi-natural habitat such as linear woodlands etc); Salmonid waters; Shellfish waters; Freshwater pearl mussel catchments; Areas likely to contain a habitat listed in Annex 1 of the Habitats Directive; Un-designated sites of importance to wintering or breeding bird species of conservation concern; Entries to the Record of Monuments and Places and Zones of Archaeological Potential;
	 Architectural Conservation Areas; and Relevant landscape designations.
Chapter 4 Overall Infrastructure Investment Programme, Sub-section 4.5 Environmental considerations	 4.5.3 Corridor and Route Selection Process for Relevant New Infrastructure The following Corridor and Route Selection Process will be undertaken for relevant new infrastructure: Stage 1 – Route Corridor Identification, Evaluation and Selection Environmental constraints (including those identified in Section 4 of the SEA Environmental Report) and opportunities (such as existing linear infrastructure) will assist in the identification of possible route corridor options; Potentially feasible corridors within which infrastructure could be accommodated will be identified and these corridors assessed. The selection of the preferred route corridor will avoid constraints and meet opportunities to the optimum extent, as advised by the relevant specialists; and In addition to the constraints identified above, site-specific field data may be required to identify the most appropriate corridors.
	 Stage 2 – Route Identification, Evaluation and Selection Potentially feasible routes within the preferred corridor will be identified and assessed. The selection of preferred routes will avoid constraints and meet opportunities to the optimum extent, as advised by the relevant specialists, taking into account project level information and potential mitigation measures that are readily achievable; In addition to the constraints identified above, site specific field data may be required to identify the most appropriate routes; and In addition to environmental considerations, the identification of route corridors and the refinement of route lines is likely to be informed by other considerations.

Table 2.1 SEA/AA recommendations that have been included within the Plan

Plan Chapter No.	Text inserted into the Plan arising from SEA/AA processes
Chapter 4 Overall	4.5.4 Appropriate Assessment
Infrastructure Investment Programme, Sub-section 4.5 Environmental considerations	 All projects and plans arising from this Plan will be screened for the need to undertake Appropriate Assessment under Article 6 of the Habitats Directive. A plan or project will only be authorised after the competent authority has ascertained, based on scientific evidence, Screening for Appropriate Assessment, and subsequent Appropriate Assessment where necessary, that: The plan or project will not give rise to significant adverse direct, indirect or secondary effects on the integrity of any European site (either individually or in combination with other plans or projects); or The plan or project will have significant adverse effects on the integrity of any European site (that does not host a priority natural habitat type/and or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000;
	or The plan or project will have a significant adverse effect on the integrity of any European site (that hosts a natural habitat type and/or a priority species) but there are no alternative solutions and the plan or project must nevertheless be carried out for imperative reasons for overriding public interest, restricted to reasons of human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest. In this case, it will be a requirement to follow procedures set out in legislation and agree and undertake all compensatory measures necessary to ensure the protection of the overall coherence of Natura 2000.
Chapter 4 Overall Infrastructure Investment Programme, Sub-section 4.5 Environmental considerations	4.5.5 Protection of European Sites No plans or projects giving rise to significant cumulative, direct, indirect or secondary impacts on European sites arising from their size or scale, land take, proximity, resource requirements, emissions (disposal to land, water or air), transportation requirements, duration of construction, operation, decommissioning or from any other effects shall be permitted on the basis of this Plan (either individually or in combination with other plans or projects ²).
Chapter 4 Overall Infrastructure Investment Programme, Sub-section 4.5 Environmental considerations	 4.5.6 Climate Change, Emissions and Energy As identified in the SEA Environmental Report that accompanies this Plan, the Plan facilitates sustainable mobility and associated positive effects, including those relating to: Reductions in/limits in increases of greenhouse gas emissions and associated achievement of legally binding greenhouse gas emissions targets; Reductions in/limits in increases of all emissions to air and associated achievement of air quality objectives, thereby contributing towards improvement of air quality and protection of human health; Reductions in/limits in increases of consumption of non-renewable energy sources and achievement of legally binding renewable energy targets; and Energy security.
	In implementing the Plan, the Authority will support relevant provisions contained in the National Climate Change Adaptation Framework (2018), the National Mitigation Plan (2017) and the Department of Transport, Tourism and Sport's 2017 "Adaptation Planning – Developing Resilience to Climate Change in the Irish Transport Sector", the National Energy and Climate Plan, Climate Change Action Plans of local authorities and any Regional Decarbonisation Plan prepared on foot of commitments included in the RSESs.
	The implementation of the Plan will incorporate relevant targets and actions arising from the sectoral adaptation plan for transport that will be prepared to comply the requirements of the Climate Action and Low Carbon Development Act 2015.
	Cognisant of the imperative to reduce emissions, the Authority will seek to ensure primacy for transport options that provide for unit reductions in carbon emissions. This can most effectively be done by promoting public transport, walking and cycling, and by actively seeking to reduce car use in circumstances where alternative options are available.
	During the preparation and/or review of policies and plans relating to climate charge, carbon emissions and energy usage, the Authority will seek to integrate Plan objectives, as appropriate.
Chapter 4 Overall Infrastructure Investment Programme, Sub-section 4.5 Environmental considerations	4.5.7 Other SEA Recommendations In implementing the Plan, the Authority will ensure that the mitigation measures included in Table 9.2 of the SEA Environmental Report are complied with.

² Except as provided for in Article 6(4) of the Habitats Directive, viz. There must be:
a) no alternative solution available,
b) imperative reasons of overriding public interest for the plan/programme/strategy/project etc. to proceed; and
c) Adequate compensatory measures in place.

Table 2.2 details measures relevant to biodiversity that have been integrated into the Plan through the commitment provided at sub-section 4.5.7 of the Plan.

Table 2.2 Provisions referred to in Integrated Transport Plan sub-section 4.5.7 "Other SEA Recommendations"

Component	Potential effect	Requirement
Various	Various – see below	Construction and Environmental Management Plans Construction Environment Management Plans (CEMPs) shall be prepared in advance of the construction of larger projects and implemented throughout. Such plans shall incorporate relevant mitigation measures which have been integrated into the Plan and any lower tier Environmental Impact Assessment Report or Appropriate Assessment. CEMPs typically provide details of intended construction practice for the proposed development, including: a. location of the sites and materials compound(s) including area(s) identified for the storage of construction refuse, b. location of areas for construction site offices and staff facilities, c. details of site security fencing and hoardings, d. details of on-site car parking facilities for site workers during the course of construction, e. details of the adjoining road network, g. measures to prevent the spillage or deposit of clay, rubble or other debris, h. alternative arrangements to be put in place for pedestrians and vehicles in the case of the closure of any public right of way during the course of site development works, i. details of appropriate mitigation measures for noise, dust and vibration, and monitoring of such levels, j. containment of all construction-related fuel and oil within specially constructed bunds to ensure that fuel spillages are fully contained; such bunds shall be roofed to exclude rainwater, k. disposal of construction/demolition waste and details of how it is proposed to manage excavated soil, l. a water and sediment management plan, providing for means to ensure that surface water runoff is controlled such that no silt or other pollutants enter local water courses or drains, m. details of a water quality monitoring and sampling plan. n. if peat is encountered - a peat storage, handling and reinstatement management plan. o. measures for invasive species (such as Japanese Knotweed). p. appointment of an ecological clerk of works at site investigation, preparation and construction phases. q. details of
Various	Various – see	Maintenance Plan
	below	Lower tier assessments should examine the need for Maintenance Plans informed by environmental considerations to be prepared and implemented.
Air and Climatic Factors	Emissions to air	Please refer to the overall approach and detail provided for by the Plan focusses significant levels of investment in sustainable transport modes and other climate related provisions integrated into the Plan. Air and Energy Contribute towards, compliance with air quality logiclation, grouphouse are emission torgets, management of paice levels, and reductions in energy usage.
Biodiversity	- Arising from	Contribute towards: compliance with air quality legislation; greenhouse gas emission targets; management of noise levels; and reductions in energy usage. Protection of Biodiversity including Natura 2000 Network
and flora and fauna	- Arising from both construction and operation of transport infrastructure and services and associated facilities/ infrastructure: loss of/damage to biodiversity in designated sites, ecological connectivity and non-	 Protection of Biodiversity including Natura 2000 Network Contribute, as appropriate, towards the protection of designated ecological sites including candidate Special Areas of Conservation (cSACs) and Special Protection Areas (SPAs); UNESCO World Heritage and UNESCO Biosphere sites; Ramsar Sites; Salmonid Waters; Shellfish Waters; Freshwater Pearl Mussel catchments; Flora Protection Order sites; Wildlife Sites (including Nature Reserves); Certain entries to the Water Framework Directive Register of Protected Areas; Natural Heritage Areas (NHAs) and proposed Natural Heritage Areas (pNHAs); Wildfowl Sanctuaries (see S.I. 192 of 1979); and Tree Preservation Orders (TPOs). Contribute towards compliance with relevant EU Environmental Directives and applicable National Legislation, Policies, Plans and Guidelines, including the following and any updated/superseding documents): EU Directives, including the Habitats Directive (92/43/EEC, as amended)³, the Birds Directive (2009/147/EC)⁴, the Environmental Liability Directive (2004/35/EC)⁵, the Environmental Impact Assessment Directive (2001/42/EC). National legislation, including the Wildlife Acts 1976 and 2010 (as amended), the Planning and Development Act 2000 (as amended) and associated Regulations, Environmental Impact Assessment Regulations, the Wildlife (Amendment) Act 2000, the European Union (Water Policy) Regulations 2003 (as amended), the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), the European Communities (Environmental Liability) Regulations 2008⁶ and the Flora Protection Order 2015. National policy guidelines (including any clarifying Circulars or superseding versions of same), including the "Landscape and Landscape Assessment" Draft Guidelines 2000, the Environmental Impact Assessment Sub-Threshold Development Guidelines 2003, Strategic Environmental Assessment Guidelines 2004 and the Appropriate Assessme

³ Including Annex I habitats, Annex II species and their habitats and Annex IV species and their breeding sites and resting places (wherever they occur).

⁶ Including protected species and natural habitats.

⁴ Including Annex I species and other regularly occurring migratory species, and their habitats (wherever they occur).

⁵ Including protected species and natural habitats.

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Component	Potential effect	Requirement
	designated habitats; and disturbance to biodiversity	 Catchment and water resource management Plans, including the relevant River Basin Management Plan and Flood Risk Management Plan (including any superseding versions of same). Biodiversity Plans and guidelines, including the 3rd National Biodiversity Plan 2017-2023 (including any superseding version of same). Freshwater Pearl Mussel Regulations (S.I. 296 of 2009) (including any associated designated areas or management plans).
	and flora and fauna	 Ireland's Environment 2016 - An Assessment (EPA, 2016, including any superseding versions of same), and to make provision where appropriate to address the report's goals and challenges.
	- Habitat loss, fragmentation and deterioration, including patch size and edge effects	NPWS and Integrated Management Plans Article 6(1) of the Habitats Directive requires that Member States establish the necessary conservation measures for European sites involving, if need be, appropriate management plans specifically designed for the sites or integrated into other development plans. The NPWS's current priority is to identify site specific conservation objectives; management plans may be considered after this is done. Where Integrated Management Plans are being prepared for European sites (or parts thereof), the National Parks and Wildlife Service shall be engaged with in order to ensure that plans are fully integrated with the Plan and other plans and programmes, with the intention that such plans are practical, achievable and sustainable and have regard to all relevant ecological, cultural, social and economic considerations, including those of local communities.
	- Disturbance (e.g. due to noise and	Coastal Zone Management Support measures to protect the coast, the coastal edge and coastal habitats; and facilitate an Integrated Coastal Zone Management approach to ensure the conservation, management and projection of man-made and natural resources of the coastal zone.
	lighting along transport corridors) and displacement of protected	Biodiversity and Ecological Networks Contribute towards the protection and enhancement of biodiversity and ecological connectivity, including woodlands, trees, hedgerows, semi-natural grasslands, rivers, streams, natural springs, wetlands, geological and geo-morphological systems, other landscape features, natural lighting conditions, and associated wildlife where these form part of the ecological network and/or may be considered as ecological corridors or stepping stones in the context of Article 10 of the Habitats Directive. Protection of Riparian Zone and Waterbodies and Watercourses
	species and coastal squeeze	Help to ensure that waterbodies and watercourses are protected from inappropriate development, including rivers, streams, associated undeveloped riparian strips, wetlands and natural floodplains. This will include the preservation habitat features/structure, such as treeline density, and protection buffers in riverine, wetland and coastal areas, as appropriate.
	- Effects in riparian zones where new crossings of	Biodiversity including non-designated biodiversity Ensure the undertaking of appropriately detailed surveying and assessment at project/EIA level and minimisation of loss of biodiversity, including old trees or tree lines or areas of vegetation, as a result of the development of new or widened infrastructure.
	waters, if any, are progressed	Help to ensure the appropriate protection of non-designated habitat features, landscapes and biological diversity.
	- Potential effects from transport emissions	Lighting Sensitive Species Lighting fixtures should provide only the amount of light necessary for personal safety and should be designed so as to avoid creating glare or emitting light above a horizontal plane. Lighting fixtures should have minimum environmental impact, thereby contributing towards the protection of amenity and the protection of light sensitive species such as bats.
	emissions	Non-native invasive species Support, as appropriate, the National Parks and Wildlife Service's efforts to seek to control and manage the spread of non-native invasive species on land and water. Where the presence of non-native invasive species is identified at the site of any proposed development or where the proposed activity has an elevated risk of resulting in the presence of these species, details of how these species will be managed and controlled will be required.
		National Peatlands Strategy Support, as appropriate, any relevant recommendations contained in the National Peatlands Strategy 2015.
Material Assets	- Generation of construction	Also see Construction and Environmental Management Plans provision above Construction Waste
	- Loss or damage to public assets	Demonstrate that all waste arising during construction phase will be managed and disposed of in a way that ensures the provisions of the Waste Management Acts an regulations and any of the relevant Local Authorities Waste Management Plans. Construction Waste Management Plans will be implemented to minimise waste and ensur correct handling and disposal of construction waste streams in accordance with the Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects, Department of the Environment, July 2006.
	and infrastructure	Waste Creation Support the minimisation of waste creation and promote a practice of reduce, reuse and recycle where possible.

Component	Potential effect	Requirement
		Waste Disposal
		Safeguard the environment by seeking to ensure that residual waste is disposed of appropriately.
		Public Assets and Infrastructure
		Contribute towards the protection of public assets and infrastructure including resources such as: public open spaces, parks and recreational areas; public buildings and
		services; and utility infrastructure (electricity, gas, telecommunications, water supply, wastewater infrastructure etc.)
Water	- Adverse	Also see measures under soil above and material assets below.
	impacts upon	Water Framework Directive and associated legislation
	the status of	Contribute towards, as appropriate, the protection of existing and potential water resources, and their use by humans and wildlife, including rivers, streams, wetlands,
	water bodies	groundwater, coastal waters and associated habitats and species in accordance with the requirements and guidance in the EU Water Framework Directive 2000
	and entries to	(2000/60/EC), the European Union (Water Policy) Regulations 2003 (as amended), the European Communities Environmental Objectives (Surface Waters) Regulations
	the WFD	2009 (SI No. 272 of 2009), the Groundwater Directive 2006/118/EC and the European Communities Environmental Objectives (groundwater) Regulations, 2010 (S.I. No.
	Register of	9 of 2010) and other relevant EU Directives, including associated national legislation and policy guidance (including any superseding versions of same). Support the
	Protected	application and implementation of a catchment planning and management approach to development and conservation, including the implementation of Sustainable
	Areas, arising	Drainage System techniques for new development.
	from changes	River Basin Management Plan
	in quality, flow	Support the implementation of the relevant recommendations and measures as outlined in the relevant River Basin Management Plan, and associated Programmes of
	and/or	Measures, or any such plans that may supersede same during the lifetime of the Plan. Proposed plans, programmes and projects shall not have an unacceptable impact
	morphology	on the water environment, including surface waters, groundwater quality and quantity, river corridors and associated woodlands. Also to have cognisance of, where
	- Increase in	relevant, the EU's Common Implementation Strategy Guidance Document No. 20 and 36 which provide guidance on exemptions to the environmental objectives of the
	the risk of	Water Framework Directive.
	flooding	Bathing Water
		Contribute towards the achievement of the requirements of the EU Bathing Water Directive and transposing Bathing Water Quality Regulations (SI No. 79 of 2008) and
		EU Mandatory Values, as a minimum, and EU Guide Values, where possible.
		Flood Risk Management Guidelines
		Comply with The Planning System and Flood Risk Management Guidelines (2009, DEHLG/OPW) (including any clarifying Circulars or superseding versions of same) and
		relevant outputs of the Catchment and Flood Risk Assessment and Management Studies (CFRAMS).
		Surface Water Drainage and Sustainable Drainage Systems (SuDs)
		Ensure that new development is adequately serviced with surface water drainage infrastructure and promote the use of Sustainable Drainage Systems, as appropriate.
Soil	Adverse	Also see requirements under other heading of water above.
	impacts on the	Soil Protection and Contamination
	hydrogeologica	Ensure that adequate soil protection measures are undertaken where appropriate. Adequate and appropriate investigations shall be carried out into the nature and
	I and ecological	extent of any soil and groundwater contamination and the risks associated with site development work, where brownfield development is proposed.
	function of the	Areas of geological interest
	soil resource as	Contribute towards the appropriate protection and maintenance of the character, integrity and conservation value of features or areas of geological interest.
	a result of	Land Take
	construction of	Contribute towards the target of the National Planning Framework's (2018) SEA to "Maintain built surface cover nationally to below the EU average of 4%."
	associated	
	facilities/	
	infrastructure	

Section 3 Consideration of Alternatives

3.1 Summary of Alternatives Considered

The various elements of the Plan are at different stages in the planning/environmental process. Furthermore, different elements of the Plan will be developed by different agencies, at different times, according to different funding allocations. For these reasons the alternatives are expressed as alternative scenarios about the sequence and degree of implementation of key elements that make up the Plan.

Transportation is highly integrated with both land-use planning and the provision of other public infrastructure, such as water services. Different alternative scenarios will give rise to different land-use patterns, resulting in different environmental effects.

The following three alternative scenarios were developed in line with government priorities in investment and taking into account the overarching provisions of the Transport Strategy for the Greater Dublin Area 2016-2035. These alternatives were examined by the SEA process and that examination was informed by the AA.

3.1.1 Scenario A: Balanced Bus and Rail

This scenario will advance the implementation of the National Transport Authority's Transport Strategy in a manner which balances investment into rail and bus projects (including both the Core Bus Network and the new MetroLink urban light rail metro service project), along with the complimentary implementation of cycling and walking infrastructure across the Greater Dublin Area.

This scenario will give rise to orderly development with balanced patterns of land use allocation – resulting in a greater likelihood of financially viable supporting utilities and amenities – as well as earlier attainment of income generation goals (through fares from orderly provision of new housing concentrations at scale). Growth will be balanced as a result of this scenario.

3.1.2 Scenario B: MetroLink Prioritisation of Funding

This scenario will advance the implementation of the National Transport Authority's Transport Strategy in a manner which prioritises investment into rail projects (specifically the new MetroLink) along with the complimentary implementation of cycling and walking infrastructure across the Greater Dublin Area.

In established urban nodes served by the MetroLink project and its associated feeder routes, this scenario will give rise to orderly development with very concentrated patterns of land use allocation within the immediate catchment of new stations. This will result in a in a greater likelihood of financially viable supporting utilities and amenities – as well as earlier attainment of income generation goals (through fares from orderly provision of new housing concentrations at scale). However, elsewhere in the Greater Dublin Area, growth will be uneven as a result of this scenario.

3.1.3 Scenario C: MetroLink Reduced Funding

This scenario will advance the implementation of the National Transport Authority's Transport Strategy in a manner which prioritises investment into bus projects (including the Core Bus network), along with the complimentary implementation of cycling and walking infrastructure across the Greater Dublin Area.

This scenario will give rise to orderly development with very dispersed patterns of land use allocation within the Greater Dublin Area. This will result in a significantly reduced and/or deferred likelihood of financially viable supporting utilities and amenities – as well as much later attainment of income generation goals (through loss of fares from orderly provision of new housing concentrations at scale). Growth will be very uneven as a result of this scenario.

3.2 Summary of Evaluation of Alternatives

3.2.1 Scenario A: Balanced Bus and Rail

This scenario will advance the implementation of the Transport Strategy for the Greater Dublin Area 2016-2035 in a manner which balances investment into rail and bus projects (including both the Core Bus Network and the new MetroLink urban light rail metro service project), along with the complimentary implementation of cycling and walking infrastructure across the Greater Dublin Area.

This scenario will give rise to orderly development with balanced patterns of land use allocation – resulting in a greater likelihood of financially viable supporting utilities and amenities – as well as earlier attainment of income generation goals (through fares from orderly provision of new housing concentrations at scale). Growth will be balanced as a result of this scenario.

This scenario will give rise to the least adverse environmental effects as it would facilitate the concentration of development around planned nodes – which will have appropriate social, environmental and mobility resources – because development will occur on lands that have been zoned and subject to SEA, AA and SFRA. Orderly development of this kind will give rise to the least adverse effects on populations, biodiversity and environmental components including air and water. The orderly and timely provision of services will help to anticipate and avoid effects on water and associated interactions with ecology and human health.

This scenario will:

- Facilitate the greatest improvement in sustainable mobility of all alternatives (reducing and limiting increases in the number of journeys by car taken as a percentage of all journeys taken), thereby facilitating the greatest reduction and limit of increases in greenhouse gas emissions, noise emissions and other emissions to air (with associated effects on human health). Such emissions would occur otherwise with higher levels of motorised transport and associated traffic. By significantly increasing the potential for plan-led, integrated development, greater usage of public transportation and less movement within denser settlements, this alternative would also be likely to result in a higher efficiency of energy resource utilisation.
- Provide for the development of transport infrastructure and services in locations which will facilitate use by those living and working in urban/suburban areas.
- Facilitate lower overall effects on ecology (including designated sites, ecological connectivity, habitats) – due to increased utilisation of lands within existing development boundaries and use of existing utilities and brownfield sites.
- Facilitate the reuse and regeneration of brownfield lands thereby contributing towards a higher efficiency of land utilisation, sustainable mobility and a reduction in the need to develop greenfield lands. By facilitating increased utilisation of lands within existing development boundaries and use of existing utilities and brownfield sites there will be lower adverse effects upon ecology, landscape designations, architectural and archaeological heritage and land take/ soil.
- Facilitate lower effects on ground and surface waters due to higher levels of development within established and serviced settlement centres that have installed/upgraded water services capable of delivering Water Framework Directive targets (and associated effects on the protection of ecology and human health).
- Facilitate the enhancement of cultural heritage and its context in urban areas and their surrounds as a result of replacing motorised transport modes with more sustainable and non-motorised modes such as walking, cycling and the new MetroLink.
- The higher levels of certainty under this alternative is likely to increase spatial concentrations
 of market-led development residential, commercial and industrial in areas that are
 consistent with regional and local land-use planning objectives. These planning objectives are
 required to be subject to SEA, AA and SFRA that facilitate the integration of environmental
 considerations. Also, the timely availability of transportation infrastructure will significantly
 increase the likelihood of co-location of other services especially water services in areas
 that are consistent with the principles of proper planning and sustainable development.

3.2.2 Scenario B: MetroLink Prioritisation of Funding

This scenario will advance the implementation of the Transport Strategy for the Greater Dublin Area 2016-2035 in a manner which prioritises investment into rail projects (specifically the new MetroLink) along with the complimentary implementation of cycling and walking infrastructure across the Greater Dublin Area.

In established urban nodes served by the MetroLink project and its associated feeder routes, this scenario will give rise to orderly development with very concentrated patterns of land use allocation within the immediate catchment of new stations. This will result in a greater likelihood of financially viable supporting utilities and amenities – as well as earlier attainment of income generation goals (through fares from orderly provision of new housing concentrations at scale). However, elsewhere in the Greater Dublin Area, growth will be uneven as a result of this scenario.

In established urban nodes served by the MetroLink project and its associated feeder routes, this scenario will give rise to a low amount and extent of adverse environmental effects as it would facilitate the concentration of development around planned nodes – which will have appropriate social, environmental and mobility resources, because development will occur on lands that have been zoned and subject to SEA, AA and SFRA. Orderly development of this kind will give rise to least adverse effects on – and therefore would contribute towards the protection of – populations, biodiversity and environmental components including air and water. The orderly and timely provision of services will help to anticipate and avoid effects on water and associated interactions with ecology and human health.

In established urban nodes served by the MetroLink project and its associated feeder routes, Scenario B will give rise to the effects described under Section 3.2.1.

However, elsewhere in the Greater Dublin Area, under this scenario:

- There will be uneven growth which would mean that unsustainable patterns of mobility and land-use will persist – with unchanged trend levels of effects on populations, biodiversity and environmental components including air and water.
- There would be an increased likelihood of congestion and delay issues at critical locations including major junctions, especially along the M50 in the near term; and over-crowding on key public transport routes, especially within the M50. Congestion will mean that there will be significant delays in reaching targets for lower emissions to air including noise and pollutants and this will be compounded by lower utilisation of public transportation. There would be a failure to maximise contributions towards improving sustainable mobility (there would be increases in the number of journeys by car taken as a percentage of all journeys taken) and a failure to contribute towards managing traffic flows. Uneven growth would also be likely to result in a reduced efficiency of energy resource utilisation.
- There would not be enough transport infrastructure and services to maximise use by those living and working in urban/suburban areas.

3.2.3 Scenario C: MetroLink Reduced Funding

This scenario will advance the implementation of the Transport Strategy for the Greater Dublin Area 2016-2035 in a manner which prioritises investment into bus projects (including the Core Bus network), along with the complimentary implementation of cycling and walking infrastructure across the Greater Dublin Area.

This scenario will give rise to orderly development with very dispersed patterns of land use allocation within the Greater Dublin Area. This will result in a significantly reduced and/or deferred likelihood of financially viable supporting utilities and amenities, as well as much later attainment of income generation goals (through loss of fares from orderly provision of new housing concentrations at scale). Growth will be very uneven as a result of this scenario.

This scenario would:

 Through the progression of bus projects, facilitate the improvements in sustainable mobility (reducing and limiting increases in the number of journeys by car taken as a percentage of all journeys taken), thereby facilitating the greatest reduction and limit of increases in greenhouse gas emissions, noise emissions and other emissions to air (with associated effects on human health). Such emissions would occur otherwise with higher levels of car transport and associated traffic. By increasing the potential for plan-led, integrated development in some areas and greater usage of bus transportation, this alternative would also be likely to contribute towards a higher efficiency of energy resource utilisation.

• Facilitate orderly development in some (dispersed) locations, including lands that have been zoned and subject to SEA, AA and SFRA; this would contribute towards sustainable development and environmental protection and management locally.

This scenario gives rise to the most potential adverse environmental effects as:

- Development will not concentrate solely around planned nodes which will have appropriate social, environmental and mobility resources. Very uneven growth means that unsustainable patterns of mobility and land-use will persist throughout the Greater Dublin Area on both zoned and unzoned lands as well as in areas with poor public transport.
- There would be an increased likelihood of congestion and delay issues at critical locations including major junctions, especially along the M50 in the near term; and over-crowding on key public transport routes, especially within the M50. Congestion will mean that there will be significant delays in reaching targets for lower emissions to air including noise and pollutants and this will be compounded by lower utilisation of public transportation. There would be a failure to maximise contributions towards improving sustainable mobility (there would be increases in the number of journeys by car taken as a percentage of all journeys taken) and a failure to contribute towards managing traffic flows. Uneven growth would also be likely to result in a reduced efficiency of energy resource utilisation.
- There would not be enough transport infrastructure and services to maximise use by those living and working in urban/suburban areas.
- Very uneven development will give rise to adverse effects on populations, biodiversity and environmental components including air and water.
- The lack of orderly and timely provision of services will generally not avoid effects on water and associated interactions with ecology and human health.

3.3 Reasons for choosing the selected alternative in light of other alternatives considered

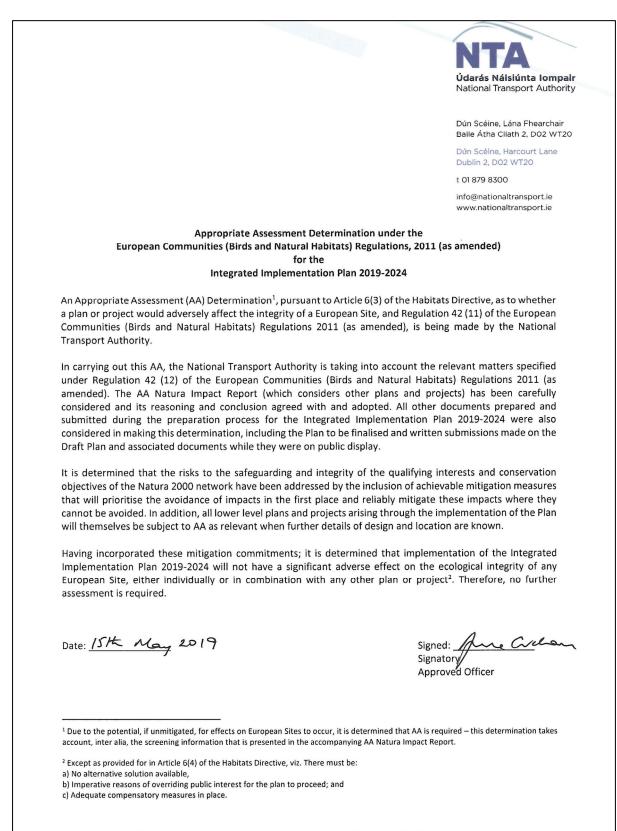
The most preferable outcome from the environmental assessment of alternatives is identified as being Alternative Scenario A and the approach outlined by this alternative is the one that is followed by the Plan.

This alternative will give rise to orderly development with balanced patterns of land use allocation – resulting in a greater likelihood of financially viable supporting utilities and amenities – as well as earlier attainment of income generation goals (through fares from orderly provision of new housing concentrations at scale). Growth will be balanced as a result of this alternative.

This alternative will also facilitate the greatest improvement in sustainable mobility of all alternatives (reducing and limiting increases in the number of journeys by car taken as a percentage of all journeys taken), thereby facilitating the greatest reduction and limit of increases in greenhouse gas emissions, noise emissions and other emissions to air (with associated effects on human health).

Potentially significant adverse environmental effects – including those relating to biodiversity and European Sites) will be mitigated by the various provisions that have been integrated into the Plan (see Section 2 of this AA Conclusion Statement).

Section 4 AA Determination



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