

SEA Potential Measures Report BACKGROUND DOCUMENT

Greater Dublin Area **Draft Transport Strategy** **2011-2030** **2030 vision**



Dublin Transportation Office

2030Vision

Final/post-consultation Strategy Potential Measures SEA Report

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Date: **27th July 2009**

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1.1 BACKGROUND TO THIS SEA REPORT

Environmental Resources Management (ERM) has been commissioned by the *Dublin Transportation Office* (DTO) to work with the DTO in undertaking a strategic environmental assessment (SEA) of their transport strategy - *2030Vision* for Greater Dublin Transport.

The DTO is required to undertake an SEA of *2030Vision* in accordance with European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (S.I. 435 of 2004).

SEA is a formal, systematic evaluation of the likely significant environmental effects of implementing, in this case a transport strategy, before a decision is made to adopt the strategy.

This document is the Final Strategy Potential Measures SEA Report (SEA Report), which sets out the results of a high-level/initial environmental assessment of generic travel and transport measures which could potentially be included in *2030Vision*. **This document is not the Environmental Report.** The Environmental Report - which will report on the environmental assessment of both the Strategy Alternatives and the draft Strategy - will be prepared and published towards the end of 2009.

A draft version of this report was prepared in February 2009 and was subject to both statutory and public consultation. The submissions received have been considered by the DTO and the draft report hereby amended. This document is the Final/post-consultation SEA Measures Report. Further information in relation to the consultation can be found in *Section 4*.

This Final Potential Measures SEA Report is an early output of the SEA process. The DTO is committed to ensuring that the SEA process influences and informs the development of *2030Vision*. SEA is being used to inform all stages of the development of *2030Vision*, from early identification of themes and measures through to alternative strategies, the preferred strategy and the adoption of a final transport strategy.

The key reporting stages in the development of *2030Vision* and the SEA process are explained in *Section 2* of this report.

There is no formal requirement to produce a separate SEA Report (such as this final SEA Report), in addition to the Environmental Report. The DTO has chosen to prepare this SEA Report as it is keen to ensure that environmental considerations are fully integrated into the strategy-preparation and adoption process and presented in a transparent manner.

1.2 KEY ASPECTS OF 2030VISION

1.2.1 Scope of 2030Vision

The Scope is to **develop a Regional Transport Strategy for the Greater Dublin Area**. *2030Vision* will set out how transport will be provided and how demand for transport will be managed within the Greater Dublin Area, for the period 2010 to 2030. It will also **seek to support and influence policies in other sectors** as appropriate.

In the case of spatial planning it will seek to support or influence policies:

- At regional level by:
 - Collaborating with the RPG project team and Steering Committee during the concurrent preparation of the Strategy and the revised Regional Planning Guidelines for the Greater Dublin Area; and
 - Consulting Dublin and Mid-East Regional Authority members at key points during the Strategy development process.
- At local authority level by:
 - Working with local authority planning and transport departments during preparation of the Strategy;
 - Commenting on draft local authority Development Plans, and other plans as appropriate, during Strategy preparation and implementation stage.

1.2.2 Overall Vision and Objectives of 2030Vision

Following extensive public consultation in 2008, the final and agreed vision for *2030Vision* is:

“Our vision of the Greater Dublin Area in 2030 is a competitive, sustainable city-region with a good quality of life for all.”

Based on this Vision, a series of five overarching objectives have been developed for the *2030Vision* which are:

1. Build & Strengthen Communities;
2. Improve Economic Competitiveness;
3. Improve the Built Environment;
4. Respect and Sustain the Natural Environment; and
5. Reduce Personal Stress.

These five objectives form the basis for the preparation and development of *2030Vision*.

1.3 *STRUCTURE OF THIS SEA REPORT*

The remainder of this Final SEA Report is structured as follows:

Section 2 provides greater detail on the *2030Vision* SEA Process.

Section 3 describes the Strategy Potential Measures stage of the SEA process (the current stage), including the environmental assessment methodology and the SEA Objectives. The role that SEA will play in the wider *2030Vision* appraisal process is also discussed.

Section 4 summarises the public and statutory consultation process, which was completed on the draft SEA Report.

Section 5 provides an overview of the results of the environmental assessment of the generic travel and transport themes and measures considered in the Strategy Potential Measures stage.

Section 6 outlines the next steps in the SEA Process.

Annex A contains the environmental assessment tables for each of the transport measures considered.

2.1 INTRODUCTION

This section presents an overview of the SEA process for *2030Vision* highlighting where the Strategy Potential Measures SEA Report fits into the overall SEA process.

Although the SEA process is primarily focused on environmental factors (generally as per the SEA Regulations), the development of *2030Vision* is also considering other factors, such as economic, social and accessibility factors. In order to consider the range of relevant factors, the outputs from the SEA process will feed into a separate strategy appraisal process, called a Multi Criteria Analysis (MCA). There are six components in the MCA and these are:

1. Safety;
2. Economy;
3. Accessibility;
4. Social inclusions;
5. Integration; and
6. Environment.

The SEA process will provide all of the environmental inputs. Additionally, the MCA itself will provide some of the non-environmental inputs to the SEA for issues such as quality of life; safety & accidents; and accessibility. A summary of this process is illustrated in *Figure 3.2* later in this document.

2.2 SEA PROCESS

The SEA process consists of a number of discrete stages and these are summarised below.

2.2.1 Screening

This is the first stage in the SEA process and is the mechanism for determining whether 'full' SEA is required (i.e. the preparation of an Environmental Report) for a plan or programme (*2030Vision* this case). The key basis for this decision is whether significant effects on the environment are likely to arise as a result of the implementation of the plan or programme.

The DTO prepared a Screening Report (Strategic Environmental Assessment Screening Report and Determination – Transport Strategy for the Greater Dublin Area 2010-2030, March, 2008) that concluded that SEA of DTO Strategy was necessary. Consultation on this Screening Report with the designated environmental authorities (and also some non-statutory bodies, such as the relevant Local Authorities in the GDA) was undertaken and the views expressed in the submissions received were that full SEA was required.

Following a review of the submissions, the DTO's final determination was that SEA was required and that it would proceed to the next stage in the SEA process, scoping.

2.2.2 *Scoping*

The second stage in the SEA process is the determination of the key issues, which are to be addressed in the Environmental Report. Scoping ensures that the SEA is focused on the relevant environmental issues and examines issues at the appropriate level of detail.

A report (Scoping Report) summarising the proposed scope of an SEA is often produced at this stage although the SEA Regulations do not specifically require the preparation of a Scoping Report. However, it is generally recognised as good practice to prepare a Scoping Report as this typically assists consultation and helps to lead to a well-defined SEA scope.

In this regard, a Draft Scoping Report was prepared and submitted (in September 2008) to the relevant designated environmental authorities so that they could make submissions on the proposed scope of the Environmental Report.

The Draft Scoping Report was submitted to 32 consultees, all of whom were invited to make a submission of its contents. A total of 10 submissions were received and subsequently reviewed and considered. A Final Scoping Report – incorporating amendments made in light of these consultation submissions – was prepared and published in January 2009. A summary of these submissions can be found in a separate document called the Scoping Consultation Submissions Report which was published in parallel with the Final Scoping Report.

2.2.3 *Preparation of the Environmental Report*

This is the stage in the SEA process where the environmental assessment takes place and is then reported in an Environmental Report. The DTO has elected to undertake a *phased* environmental assessment and this has resulted in the preparation of a draft and Final SEA Report (i.e. this document), in addition to the draft and Final Environmental Report. The main elements to the phased environmental assessment are illustrated in *Figure 2.1* and summarised below:

Strategy Potential Measures SEA Report (SEA Report)

As noted earlier in *Section 1.1*, this SEA Report represents the final results of a high-level environmental assessment of a set of transport measures which could potentially be included in *2030Vision*. This document is the final report of this stage of the environmental assessment.

The Environmental Report is the key document in the SEA process as it outlines the likely significant effects on the environment and details the iterative process through which mitigation measures to address the significant adverse effects have been recommended and considered.

The Environmental Report will also report on the environmental assessment of strategic alternatives, of which three will be developed and assessed in relation to *2030Vision*. The results of the assessment of these strategic alternatives will form the basis for the development of the preferred draft strategy. It is likely that the preferred draft strategy will be comprised of various elements of each of the strategic alternatives.

2.2.4 *Consultation*

Consultation on the draft strategy (i.e. *2030Vision*) and the Environmental Report is required with the relevant designated environmental authorities and also with the public. Regarding the SEA of *2030Vision*, a draft environmental Report and a draft *2030Vision* will be made available. Submissions on both draft documents will be invited from all the consultees and the general public.

2.2.5 *Consideration of Submissions*

Following the statutory and public consultation stage, there is a requirement that all submissions received must be considered and the draft Strategy amended, if deemed necessary. Any amendments to *2030Vision* may warrant the identification of additional/new significant environmental effects. If such additional significant effects do arise, there is likely to be a need to develop additional mitigation measures.

A key output from this stage will be a Final Environmental Report, which will reflect any additional effects from revisions to the draft *2030Vision*. It may also reflect any submissions made by the public and the statutory consultees.

Following a consideration of the consultation submissions received (and associated amendments to *2030Vision*), the DTO may adopt the *2030Vision*.

2.2.6 *Preparation of the SEA Statement*

Following the formal adoption of the *2030Vision* by the DTO, the final stage in the SEA process is the preparation of the SEA Statement, which is a document summarising how environment considerations have been integrated into the adoption of the *2030Vision*. It also summarises how the various submissions were considered and whether or not these resulted in the *2030Vision* being amended.

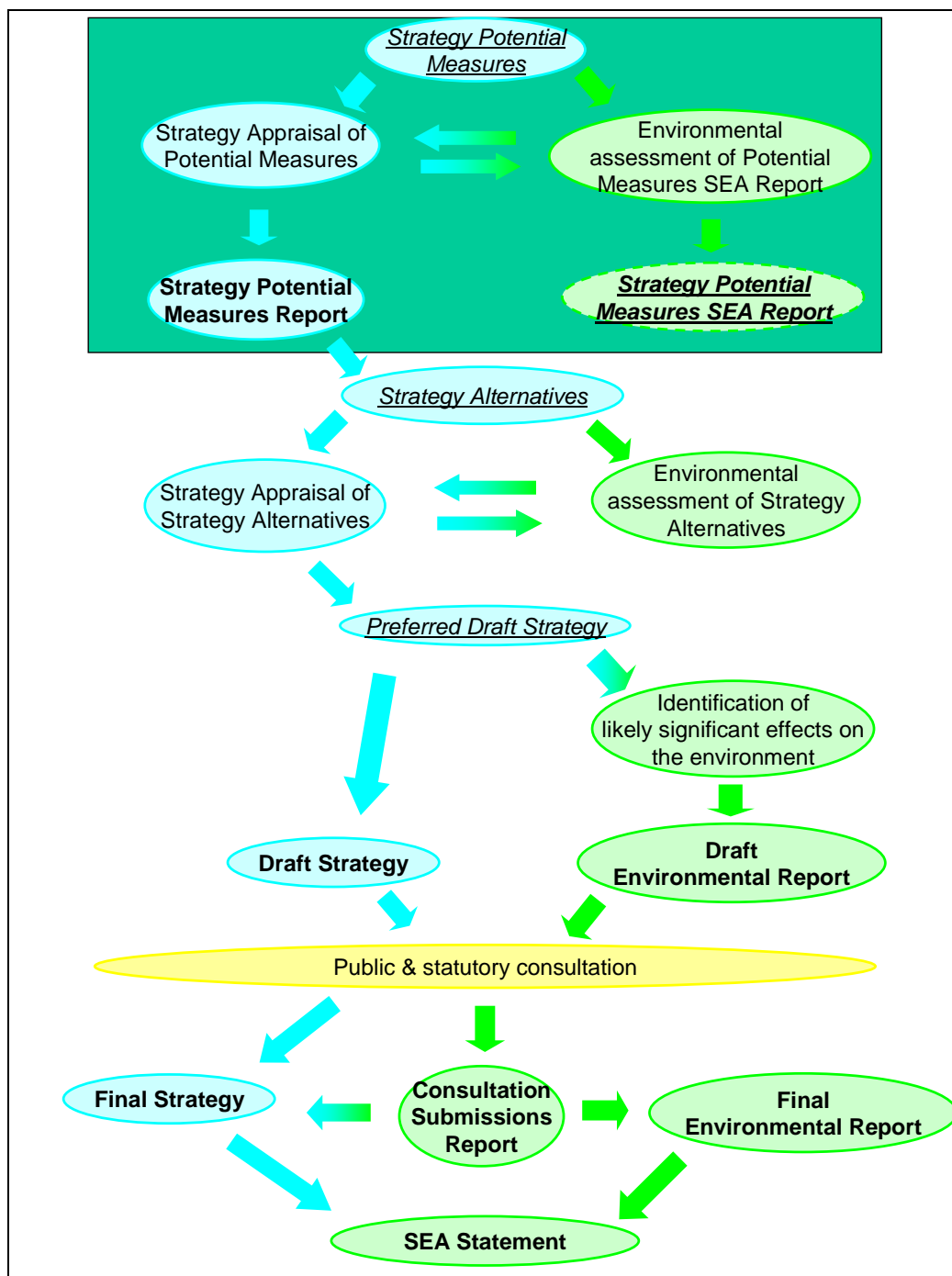
In parallel with the publication of the SEA Statement, a Final Environmental Report will be prepared, containing amendments following a consideration of

submissions received during the consultation stage of the SEA (*Section 2.2.4* above).

2.2.7 *Monitoring*

Following publication of the SEA Statement, the SEA process is concluded. However, monitoring of the implementation of the adopted *2030Vision* will be undertaken for its duration, up until the next iteration of the Strategy is adopted. The overall objective of monitoring is to monitor the significant environmental effects of the implementation of *2030Vision* so as “to identify at an early stage unforeseen adverse effects and to be able to undertake appropriate remedial action” (Article 10 of SEA Directive and Regulation No. 17 of S.I. 435 of 2004).

Figure 2.1 Environmental assessment process and its inputs to the Strategy appraisal and development process



Current stage in the environmental assessment process is shown with the dark green box.

This SEA Reports position in the environmental assessment process is illustrated by underlined & bold text. Other reports and outputs are presented in **bold**.

Strategy outputs as developed by the DTO are presented underlined and in italics.

Source: ERM and DTO (2009)

3.1 INTRODUCTION

This section presents the environmental assessment methodology regarding the various transport measures. The environmental assessment methodology, SEA Objectives and rating system are discussed below.

The aim of the environmental assessment of the transport measures is to gain an understanding of the level of contribution each individual measure can make to improve the environment or otherwise and whether they will have a role to play as part of *Vision 2030*. The outcome of this assessment will then inform decisions by the DTO as to which measures to take forward to the Strategy Alternatives stage.

3.2 METHODOLOGY

This environmental assessment has been undertaken using the SEA Objectives (see *Section 3.3* below). In considering the significance of the effects on the environment, the assessment evaluates whether the measure would be likely to alter the current (and future, where applicable) baseline environment and what the outcome of this change would be in relation to the SEA Objectives. The assessment considers whether the intervention is likely to move in the positive or negative direction, or is likely to have no effect (i.e. it is neutral).

To assist with the clarity of reporting, a seven-point rating scale has been used:

- -3 Major negative effect (*significant*);
- -2 Moderate negative effect (*significant*);
- -1 Minor negative effect (not significant);
- 0 Neutral;
- +1 Minor positive effect (not significant);
- +2 Moderate positive effect (*significant*); and
- +3 Major positive effect (*significant*).

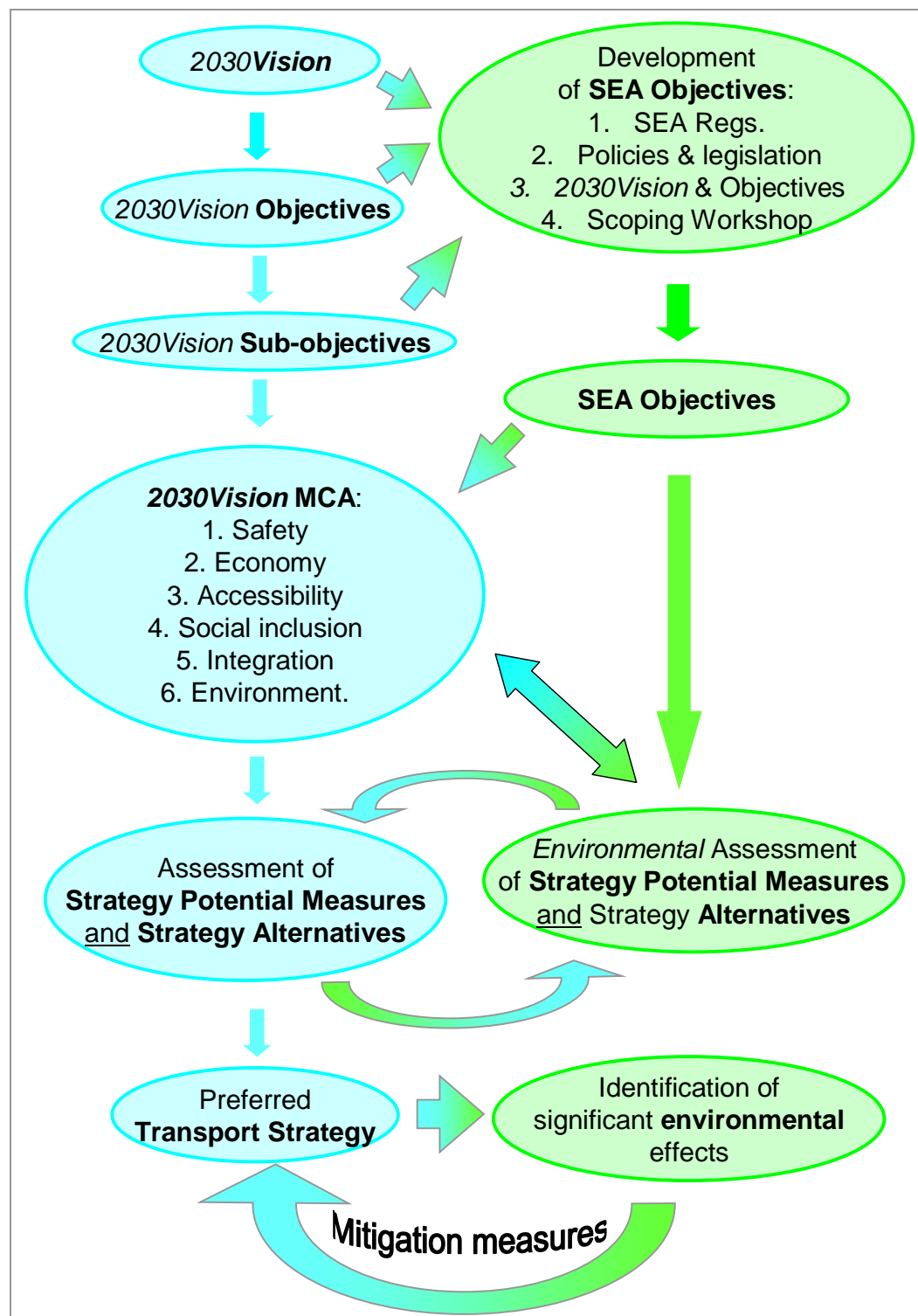
A key point is that the transport measures being considered at this stage are very strategic and generic in detail – they are not specifically developed for the GDA at this point nor do they have spatial elements or a geographic context. Thus, the environmental assessment is high-level in nature at this early stage. The high-level assessment is not based on bespoke transport modelling, but available data on the qualitative performance of the various transport strategy measures against each of the SEA Objectives. The potential impacts considered are generic and do not have a specific geographic component.

Each measure was also assessed as a stand-alone element; there is no consideration of the combined or cumulative effects with other measures.

Such an assessment will take place during the environment assessment of the strategy alternatives: this is the next stage in the overall SEA process (*Section 2.2.3*).

As noted previously in *Section 2.1*, the SEA results are only one of the inputs to the MCA process (with the SEA results informing the environmental component of the MCA), which is the main and overall strategy assessment tool. *Figure 3.2* below shows the integration and linkages between the SEA process and the wider/overall MCA process.

Figure 3.2 *Links and interactions between the SEA and the Strategy Appraisal Framework*



3.3 STRATEGY MEASURES

The strategy measures are the ‘building blocks’, which will be used to develop three strategy alternatives. In order to determine which of the measures performs best (and also to determine which measures are not as effective as

was hoped), each measure will be assessed as per the methodology in *Section 3.2* above.

There are a total of 76 transport measures spread across a total of 21 main themes as follows (respective codes for each of the individual measures are contained in brackets after each category below):

1. Bus Strategy (BS1 – BS6);
2. Direct charges on road users (DC1 – DC6);
3. Network integration and development (NI1 – NI7);
4. Improved passenger environment (PE1, PE2 & PE4);
5. Rail and light rail strategy (RL3, RL5, RL6, RL8 – RL10);
6. Motorcycle strategy (MC1);
7. Water network (WN4);
8. Traffic management (TM1 – TM3);
9. Multi modal Information (MM3, MM5 – MM7);
10. New Road Capacity (RC1, RC2, RC4 – RC6);
11. Streetscape (SS3, SS6 & SS7);
12. Fiscal Measures to encourage transport and land use integration (FM1, FM3 & FM4);
13. Integration with Other Government Sectors (IG1);
14. Planning measures which reduce the need to travel (PM2 – PM4, PM6, PM9 & PM10);
15. Smarter Choices (SC6, SC8, SC10 – SC12);
16. Walking strategy (WS5);
17. Cycling (CY8 – CY10);
18. Freight Strategy (FS4 – FS6);
19. Parking strategy (PS1, PS3, PS4, PS7 & PS9);
20. Transport and Social Inclusion (SI3 & SI4); and
21. Transport and Environment (TE1 & TE2).

Specific detail on each of the measures within the above 21 themes can be found in the respective assessment tables (A.1 – A.76) in *Annex A*.

The draft SEA Potential Measures Report contained a total of 94 transport measures. Following the public consultation phase in February / March 2009 a number of changes were made to the long-list of measures for packaging and appraisal, thus completing and finalising the Stage 1 assessment process. The changes resulted from a combination of feedback from the public consultation exercise, suggestions received from Technical Groups, SSG and DTO, and significant changes in groups of measures, held over from the pre-consultation phase of Stage 1.

A number of themes defined the types of changes made to the long-list of measures, i.e. measures missed from the original list, measures too narrowly defined, measures that did not reflect the local context and those that were deemed enabling tools only. As a result only four wholly new measures emerged from the public consultation including:

- lower public transport fares at all times;
- rail station parking expansion;
- motorcycle measures; and
- traffic and parking enforcement.

In addition a number of existing measures were re-grouped and redefined. For the most part, these fell into the ‘Information and Marketing’, ‘Smarter Choices’, ‘Rail and Luas’, ‘Traffic Management’ and ‘Freight and Distribution’ categories, where there had been some previous difficulty experienced in attaching schemes to measures. This final process of redefinition resulted in the reduction of the long-list from 94 to 76 types of measures.

3.4

SEA OBJECTIVES

Table 3.1 below contains the SEA Objectives. It should be noted that these have been the subject of extensive consideration and consultation with a range of statutory authorities including the Department of Communications, Marine & Natural Resources; the Department of Environment, Heritage & Local Government (Development Applications Unit); and the Environmental Protection Agency during the SEA scoping exercise (see *Section 2.2.2*; the Final SEA Scoping Report and the SEA Scoping Consultations Submissions Report: both available on www.23030vision.ie).

Table 3.1 **SEA Objectives**

SEA Topic	Proposed SEA Objective	Comments
Biodiversity, flora & fauna	To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	This Objective is focused on the protection of Natura 2000 sites (SACs and SPAs), which are ecological sites of European-level importance. Also included are NHAs; ecological sites of national importance. The focus is on significant impacts, as this is the threshold used in the Habitats Directive (and associated Irish Regulations) with regards to European-designated ecological sites.
	To support the overall goal of the National Biodiversity Plan.	The overall goal is to secure the conservation, including where possible the enhancement, and sustainable use of biological diversity in Ireland and to contribute to conservation and sustainable use of biodiversity globally.
	To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	The focus for this Objective is local-level biodiversity. The basis for this Objective is that ecological sites can still be of value, even if they are not.
Landscape	To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	This Objective is focused on the protection of designated and protected landscapes and landscape features. Also included are Conservation Areas, primarily in urban or townscape settings.
	To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	This Objective is addressing the various undesignated landscape features and areas, which make up the majority of the GDA.
Population	To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	This Objective is focused on increasing access to employment opportunities, especially for those who are physically, economically or socially disadvantaged. Access refers to both assisting with the creation of additional employment opportunities and also providing better, faster, reliable and frequent access to the main centres of employment in the GDA.
	To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	The purpose of this Objective is to increase accessibility to quality public, cultural and community services, such as the full range (pre-school to 3 rd /4 th level) of education facilities, health and medical care facilities and services, public offices and community facilities (e.g. libraries, local authority offices, community halls), professional services (e.g. banking), cultural and leisure facilities (e.g. cinemas, theatres, museums etc.) and retail and service areas (e.g. local shops to large/regional retail centres).

SEA Topic	Proposed SEA Objective	Comments
Human health	To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	This Objective is directed at the relevant (i.e. transport-related) aspects of quality of life (QoL) of the residents, workers and visitors in the GDA. Potential positive aspects of QoL regarding transport issues include journeys faster and shorter (thereby shortening the daily commuting times for people); more attractive and pleasant journeys (reducing over crowding and delays, providing modern transport infrastructure) and reducing travel/commuting stress (more frequent, safer and reliable transport services). It is acknowledged that the overall Vision for the Strategy (Section 3.3) is also focused on “improving quality of life”; however, QoL regarding this specific SEA Objective is primarily focused on aspects of QoL linked to travel and transport use.
	To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	This Objective is focused on the impact that noise and vibration from transport activities and infrastructure (road traffic, rail and tram/LUAS transport etc.) and is based around the Environmental Noise Directive (EU Directive 2002/49/EC). The overall objective of this Directive is to provide a basis for developing EU-wide measures to reduce noise emitted by the major sources of noise, in particular road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment.
	To minimise safety risks to human health arising from transport related activity.	This Objective is designed to address the risks to human safety and health from transport activities and infrastructure. Typical risks include risk of accidents/collisions between pedestrians and cyclists and cars and buses.
	To support health improvements and benefits from transport-related activities.	This Objective is focused on potential health improvement and benefits which could arise from transport-related activities, principally promoting and encouraging greater uptake of softer modes of transport.

SEA Topic	Proposed SEA Objective	Comments
Water	To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD).	The Objective is focused on the WFD and the associated RBMP and POMs. The fundamental objective of the WFD aims at maintaining 'high status' of waters where it exists, preventing any deterioration in the existing status of waters and achieving at least 'good status' in relation to all waters by 2015. The WFD sets a framework for comprehensive management of water resources in the European Community, within a common approach and with common objectives, principles and basic measures. The WFD will be implemented by the local authorities through a series of RBMPs (8 for the island of Ireland) as associated POMs (drafts of which are likely to be available in January 2009).
	To minimise impacts to surfacewater systems and resources.	The aim of this Objective is to minimise impacts to surfacewater systems and resources, such as rivers, streams, lakes and surfacewater abstraction points.
	To minimise impacts to groundwater systems and resources.	The purpose of this Objective is to minimise impacts to groundwater systems and resources, such as vulnerable aquifers and groundwater abstraction points.
	To minimise impacts to coastal systems and resources.	The purpose of this Objective is to minimise impacts to coastal systems and resources.
	To minimise impacts to transitional systems and resources.	The purpose of this Objective is to minimise impacts to transitional systems and resources, such as estuarine and wetland systems.
	To minimise the risk of flooding.	This Objective is focused on minimising the risk of flooding.
Air	To reduce negative air quality impacts arising from transport-related emissions.	The focus of this Objective is on reducing negative air quality impacts from transport-related emissions, such as traffic emissions (e.g. PM _{10s} , NO ₂ , etc)
	To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	This Objective is focused on the EU Air Quality Directives, which set down air quality standards in Ireland and the other member states for a wide variety of pollutants. The various thresholds in the Directives have been transposed into Irish Law via appropriate Irish Regulations.

SEA Topic	Proposed SEA Objective	Comments
Climatic factors & climate change	To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	The overall purpose of this Objective is to reduce the production of greenhouse gas emissions arising from transport and related activities. The Objective is focused on the fact that all forms of mechanised transport (i.e. all transport options apart from soft-modes) produce greenhouse gases and consume fossil fuels (either directly or indirectly). This Objective attempts to reduce the overall carbon footprint of the wider transport network. Ideally, there would be no need to use mechanised transport (i.e. use soft modes), thereby having zero greenhouse gas emissions. Where there is a need to travel, the Strategy will seek to promote more sustainable forms of transport and travel patterns. Examples of these include use of public transport services such as bus, Luas, DART, etc. These more sustainable forms of travel have per capita/head lower greenhouse gas production levels and lower fossil fuel consumption levels, in comparison to an equivalent private-car based journey.
Soil & geology	To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	This Objective is focused on the conservation of important and vulnerable soils, which are used for agricultural production.
	To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	This Objective is designed to reduce the overall need for new construction materials and to reduce the generation of construction wastes as part of the construction of transport infrastructure projects. Ways to achieve this Objective include greater demolition and construction materials reuse and recycling.
	To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	The focus of this Objective is to minimise impacts to protected and designated geological and geomorphological sites, which may arise as a result of transport infrastructure projects.

SEA Topic	Proposed SEA Objective	Comments
Material assets	To protect public assets and infrastructure.	This Objective is focused on the protection of public assets and infrastructure. This Objective covers a wide-range of 'on the ground' resources, such as public open spaces, parks and recreational areas; public buildings and services; utility infrastructure (electricity, gas, telecommunications, water supply, wastewater infrastructure etc.). These may be impacted with the development of future transport infrastructure projects.
	To reduce the fossil fuel demand by the transport sector.	This Objective is focused on the rising demand for fossil fuels for transport-related proposals and activities. This Objective sees fossil fuels as an important and non-renewable asset, for both the economy and for the population of the GDA (and the country). Reducing fossil fuel consumption will make a contribution to addressing the issue of security of fossil fuel supplies, a significant issue for Ireland as the State is one of the nations most dependant on the importation of fossil fuels.
	To assist with the reuse and regeneration of brownfield sites.	The basis for this Objective is to promote the reuse and regeneration of brownfield sites (previously developed sites) instead of greenfield (new/undeveloped) sites, especially those close to key transport corridors and large centres of population in the GDA.
Cultural heritage (inc. architectural and archaeological heritage)	To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	This Objective is focused on minimising impacts to designated cultural, architectural and archaeological resources (e.g. Protected Structures, Areas of Architectural Heritage, Areas of High Archaeological Potential), which may be affected by transport infrastructure projects or policy recommendations in the Strategy.

Source: ERM (2008)

4.1

INTRODUCTION

This section presents a summary of the consultation which was undertaken on the draft SEA Potential Measures Report, which was published in February 2009. As part of the SEA scoping consultation process, a total of 32 consultees were identified and consulted on the draft SEA Scoping Report. 10 of these consultees made submissions. All the 10 consultees who formally responded to the SEA Scoping Consultation were posted a hard copy of the draft SEA Potential Measures Report. These consultees were:

- Dublin City Council;
- Meath County Council;
- Irish Rail;
- National Roads Authority;
- *Dept. of Env. Heritage & Local Government;*
- *Environmental Protection Agency (EPA);*
- *Dept. of Communications, Energy & Natural Resources;*
- Northern Ireland Environment Agency;
- Dublin Airport Authority; and
- Geological Survey of Ireland.

It should be noted that the 10 consultees also included the three designated environmental authorities (in italics in the above list).

The remaining 22 consultees were formally sent a letter notifying them that the draft SEA Potential Measures Report was available for their review and comment on www.2030vision.ie and that the DTO was inviting them to make a formal submission on the contents of the Report. These 22 consultees were:

- Fingal County Council;
- Dun Laoghaire-Rathdown County Council;
- South Dublin County Council;
- Kildare County Council;
- Wicklow County Council;
- Dublin Bus;
- Bus Eireann;
- Railway Procurement Agency;
- Dept. of Transport;
- Dept. of Env. Heritage & Local Government: Spatial Policy Unit;
- Dublin Regional Authority;
- Border Regional Authority;
- Mid-East Regional Authority;
- South-East Regional Authority;
- Midlands Regional Authority;

- An Taisce;
- Dept. for Regional Development Northern Ireland;
- Grangegorman Development Agency;
- Eastern Regional Fisheries Board;
- Fáilte Ireland;
- Office of Public Works; and
- Dublin Docklands Development Authority.

4.2

CONSULTATION RESPONSES

Comments were received from the EPA and the key points raised in this submission were:

- it would be useful if the overall DTO 'Vision' / objectives of the Strategy up-front in the document;
- use of 'SEA Report' in the title is confusing – its not the environmental report / full assessment. Elaboration regarding the SEA Report and its role in the overall SEA is required.;
- need to elaborate on the phased-nature of the overall environmental assessment process;
- further detail required on the linkages between the SEA and MCA processes;
- summary of overview of results should focus on the main/significant positive and negative results.

This SEA Report has been amended to reflect the above points raised by the EPA.

5.1

INTRODUCTION

This section presents a summary of the results of the high-level environmental assessment of the transport measures. It should be noted that the purpose of this high-level assessment is to identify the various environmental attributes - against the SEA Objectives - of each of the measures. This information will assist the DTO, through the MCA process, in deciding how to combine the measures into various Strategy Alternatives (the next stage in the strategy development and SEA process).

The assessment tables in *Annex A* set out the anticipated performance of each of the measures in relation to each of the 27 SEA Objectives. *Figure 5.1* below presents an illustrated summary of these results. Note that summary results are presented here under each of the nine environmental topics, rather than the 27 SEA Objectives. In order to condense the results against the 27 SEA Objectives under the nine environmental topic headings, it was necessary to summarise the various scores under the SEA Objectives. This summarising was precautionary in nature and generally took a 'worse-case' score (e.g. if there were scores of 0, 0 and -1 under the three Biodiversity SEA Objectives, -1 was typically assumed to be the summary score). For a full discussion and commentary of the performance against the SEA Objectives please refer to *Annex A*.

The seven-point rating scale used in both *Figure 5.1* and in *Annex A* represents the potential for a range of positive, neutral and negative impacts as follows:

- -3 Major negative effect (*significant*);
- -2 Moderate negative effect (*significant*);
- -1 Minor negative effect (not significant);
- 0 Neutral;
- +1 Minor positive effect (not significant);
- +2 Moderate positive effect (*significant*); and
- +3 Major positive effect (*significant*).

Figure 5.1 *Summary of the environmental assessment results*

		Biodiversity	Landscape	Population	Human health	Water	Air	Climate	Soil & geology	Material assets	Cultural heritage
BS1	Increased priority for buses	0	0	1	2	0	2	2	0	2	0
BS2	Enhanced quality bus corridor services	0	1	2	2	0	1	1	0	1	0
BS3	New and improved bus fleet	0	0	1	1	0	1	1	0	1	0
BS4	Quicker bus boarding/alighting	0	0	1	2	0	1	1	0	1	0
BS5	More evening and weekend buses	0	0	1	1	0	-1	-1	0	-1	0
BS6	Additional bus services	0	0	2	1	0	1	1	0	1	0
DC1	Region-wide 'road pricing'	0	1	2	3	0	3	3	0	3	1
DC2	Daytime city centre charging	0	1	-2	2	0	2	2	0	2	1
DC3	Rush-hour city centre charging	0	1	-1	2	0	2	2	0	2	1
DC4	New Toll Roads or lanes	-2	-2	1	-1	-1	-1	-1	-2	-1	-2
DC5	Tolls on existing motorways	0	-1	0	-1	0	-1	0	0	0	0
DC6	Lorry charges (on major roads)	0	1	0	1	0	1	1	0	1	0
NI1	Better access to stops and stations	0	0	2	2	0	0	0	0	0	0
NI2	On-demand taxis and minibuses	0	0	1	1	0	0	0	0	0	0
NI3	Bicycles on public transport	0	0	1	1	0	0	0	0	0	0
NI4	All public transport tickets	0	0	1	1	0	0	0	0	0	0

		Biodiversity	Landscape	Population	Human health	Water	Air	Climate	Soil & geology	Material assets	Cultural heritage
NI5	Through-fares on public transport	0	0	1	1	0	0	0	0	0	0
NI6	Lower fares outside rush hours	0	0	1	1	0	0	0	0	0	0
NI7	Lower public transport fares	0	0	2	1	0	1	1	0	1	0
PE1	Higher quality buses and trains	0	0	0	1	0	0	0	0	0	0
PE2	Improve public transport interchanges	0	2	1	1	0	0	0	0	0	0
PE4	Improvements to bus stops	0	1	1	1	0	0	0	0	0	0
RL3	More evening and weekend trains	0	0	1	2	0	0	0	0	0	0
RL5	New train and Luas lines and extensions	-2	-2	2	2	-1	2	2	-2	2	-2
RL6	More rail stations/stops	-1	-1	2	2	-1	1	1	-1	1	-1
RL8	Parking at stations	-1	-1	1	1	-1	1	1	-1	1	-1
RL9	More frequent and bigger trains	-2	-2	2	2	-2	2	2	-2	2	-2
RL10	More frequent trams	0	0	2	2	0	2	2	-1	2	0
MC1	Motorcycling strategy	0	0	1	0	0	0	0	0	0	0
WN4	River / sea boat services	0	0	1	1	-1	0	0	0	0	0
TM1	Urban traffic management	0	1	1	1	0	1	1	0	1	0
TM2	Traffic signal control and co-ordination	0	0	1	1	0	0	0	0	0	0

		Biodiversity	Landscape	Population	Human health	Water	Air	Climate	Soil & geology	Material assets	Cultural heritage
TM3	Active traffic management on strategic and major roads	0	-1	1	-1	0	-1	-1	0	-1	0
MM3	Live public transport information	0	0	1	1	0	0	0	0	0	0
MM5	Public transport information	0	0	1	1	0	0	0	0	0	0
MM6	Better signing and wayfinding	0	0	1	1	0	0	0	0	0	0
MM7	Real time road user information	0	0	1	-1	0	0	0	0	0	0
RC1	Local road improvements	-1	-1	1	-1	-1	-1	-1	-1	-1	-1
RC2	New local road links	-2	-2	1	-1	-1	-2	-2	-2	-2	-2
RC4	Widening 'strategic' roads	-2	-2	2	-1	-1	-2	-2	-2	-2	-2
RC5	New main roads and bypasses	-3	-3	2	-2	-1	-2	-2	-3	-2	-3
RC6	New river/canal crossings	-2	-2	1	-1	-2	-1	-1	-2	-1	-2
SS3	Build residential 'Home Zones'	0	2	0	1	0	1	0	0	0	0
SS6	Pedestrian areas in town centres	0	2	0	2	0	2	1	0	1	1
SS7	Look after streets better	0	2	0	1	0	0	0	0	0	0
FM1	Tax value of land not property	0	1	1	1	0	1	1	0	2	0
FM3	Increase taxes on motoring	0	0	-2	1	0	1	1	0	1	0
FM4	Fuel or carbon taxes	0	0	-2	2	0	2	2	0	2	0

		Biodiversity	Landscape	Population	Human health	Water	Air	Climate	Soil & geology	Material assets	Cultural heritage
IG1	Better located Government developments and facilities	0	0	2	1	0	1	1	0	1	0
PM2	More 'mixed use' development	0	1	2	1	0	2	2	0	2	0
PM3	Mix housing types in schemes	0	0	1	1	0	1	1	0	1	0
PM4	More accessible housing estates	0	1	1	1	0	1	1	0	1	0
PM6	Make developers improve transport	0	1	1	1	0	1	1	0	1	0
PM9	Offices, shops. etc. near stations	0	1	2	2	0	2	2	0	2	0
PM10	Homes close to public transport	0	0	2	1	0	2	2	0	2	0
SC6	Personal journey planning	0	0	1	1	0	1	1	0	1	0
SC8	Develop 'Car clubs'	0	1	1	1	0	1	1	0	1	0
SC10	On-line working etc.	0	0	0	1	0	1	1	0	1	0
SC11	'Mobility management' planning	0	0	2	1	0	1	1	0	1	0
SC12	Promotion of sustainable travel	0	0	1	1	0	0	0	0	0	0
WS5	Improve pedestrian facilities	0	1	1	1	0	1	1	0	1	0
CY8	Improve/extend cycle routes	0	0	1	1	0	1	1	0	1	0
CY9	Provide secure cycle parking	0	0	0	1	0	0	0	0	0	0
CY10	On-street bicycle rental	0	0	1	1	0	0	0	0	0	0

		Biodiversity	Landscape	Population	Human health	Water	Air	Climate	Soil & geology	Material assets	Cultural heritage
FS4	More non-road carriage of freight	-2	0	0	1	-2	0	1	0	1	0
FS5	Strategic freight network	-1	1	1	1	-1	1	1	-1	1	-1
FS6	Sustainable distribution and servicing strategy	-1	1	1	1	-1	2	1	-1	1	-1
PS1	More commuter car parking	0	1	0	1	0	0	0	0	0	1
PS3	Control on-street parking stays	0	0	-1	0	0	2	2	0	2	0
PS4	Park-and-ride on bus	-1	-1	1	1	-1	1	1	0	1	-1
PS7	Limit parking in developments	0	1	-1	0	0	1	1	0	1	0
PS9	Limit commuter car parking	0	0	-1	0	0	2	2	0	2	0
SI3	Physical access improvements	0	0	2	2	0	0	0	0	0	0
SI4	Access to community facilities	0	0	3	2	0	2	2	0	2	0
TE1	'Eco-friendly' vehicles	0	0	0	1	0	1	1	0	1	0
TE2	Low Emission Zone controls	0	0	0	0	0	2	1	0	1	0

5.2

OVERVIEW OF RESULTS

It is unlikely that the majority of the transport measures would result in significant improvement to the environment in their own right or in isolation. For a transport strategy to be effective in bringing about positive environmental change, it must contain a whole range of complimentary measures. The combining and packaging-up of the various measures into possible strategy alternatives will be the next stage in the process.

Relatively large-scale changes in traffic are required to bring about a marked environmental change. For example, a 25% change in traffic would be expected to change traffic noise levels by approximately 1dB(A), a level of change, which is just perceptible to the human ear. When assessing the environmental effects of traffic, as a rule of thumb, a change of more than 10%-30% in traffic flows can be taken as a general indicator of marked environmental change.

Measures based on charging for road use (**DC** measures), such as the region-wide road pricing, would have a potential to bring about substantial reductions in traffic with consequent environmental benefits in terms of reduced air pollution, traffic noise and greenhouse gas emissions. The extent of any reduction in traffic will depend greatly on the level of road pricing/charge, which is applied. There is a potential with such measures that they can lead to some adverse impacts on accessibility, particularly for those on low incomes and those who are highly-car dependent. In implementing such measures, it is important that there is an appropriate level of provision of public transport in order to provide all travellers with an alternative mode of transport to the road user charge.

Some of the most important measures relate to better integration and fiscal encouragement of better land use planning and transport (e.g. the **PM** and **FM** measures). These measures would be expected to reduce overall car-based trip generation, improve accessibility and Quality of Life (QoL), and also have air quality, noise, climate change and fossil fuel efficiency benefits.

A key theme to emerge from the high level assessment is that measures which are targeted at creating a modal shift from car to public transport (PT) – such as the **BS** and **RL** series of measures – would be expected to result in improvements in air quality (through reducing car-based emissions) and a corresponding decrease in fossil fuel consumption and greenhouse gas production, all of which would be positive environmental effects. These types of measure would also be expected to play a role in improving accessibility by public transport and QoL for the wider GDA population.

Any measures that involve sizeable landtake to construct new transport infrastructure – such as new toll roads (e.g. **DC4**), road widening and new strategic links (**RC** series), new railways and trams (e.g. **RL9** and **RL5**) – have the potential to result in negative environmental effects on areas, which might have a value for their biodiversity, landscape, water, cultural heritage etc. While these measures may improve accessibility and offer other transport benefits, from an environmental perspective, these measures are generally seen to perform less well than those that make more efficient use of existing infrastructure. However, it is important to note that through appropriate design and the application of appropriate mitigation measures, the potential for environmental impacts can be reduced in many cases.

Some of the measures considered at this stage are based around limiting access (physically, regulatory and fiscally) of the private car in favour of softer

modes of transport or PT (e.g. **FM3 & 4**, **DC1, 3 & 5** and **SS6**). These measures would be expected to result in improvements in overall accessibility and QoL for the non-car user, although residual car users may have a reduced QoL and accessibility. This impact will be exacerbated for those with little alternatives to car use.

Measures which increase the overall level of information and travel knowledge (such as **SC6, 11 & 12** and **MM3 & 5**) would be expected to result in some improvements in overall accessibility and QoL, although these positive effects can be limited by the overall capacity of the PT network and the availability and proximity to the PT system.

From an environmental perspective, it is unlikely that any of the potential measures would be completely discounted on environmental grounds alone at this stage, particularly given their generic nature. The measures with the greatest potential negative scores are **RC4, 5 & 6**. These measures propose a significant element of strategic road building and the nature and scope of these developments are such that moderate to major negative impacts are likely. However, there will also be associated increases in accessibility and QoL for subsequent road users.

6 *NEXT STEPS*

6.1 *INTRODUCTION*

This final section will outline the next steps in this stage of the SEA and also the future stages in the SEA process and the strategy development processes.

6.2 *ENVIRONMENTAL ASSESSMENT OF STRATEGY ALTERNATIVES*

Following the completion of this stage of the environmental assessment, the SEA process will progress towards the environmental assessment of the strategy alternatives. Emerging from this stage will be a preferred strategy, which shall also be subjected to environmental assessment. Both of these assessments will be reported in the draft Environmental Report. This will be publically available for consultation along with the draft *2030Vision*.

Annex A

Themes & Measures environmental assessment tables

Table A.1 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
BS1: Increase road priority for buses			
	SEA Objectives	Rating	The key aspect of this measure is that it is focused on enhancing and improving existing infrastructure. Thus, the potential impacts associated with new development arising from landtake are not anticipated. The main benefits are improvements in the accessibility across the GDA (but only for those along bus routes which are subject to these enhancement measures) and a modal shift from private car to the (now-improved) bus service, resulting in lower air pollution emissions and greenhouse gas emissions. Moderately significant improvements are expected for the QoL of commuters, due to shorter and faster bus journeys as well as better bus service reliability.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.2 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
BS2: Better 'Quality Bus Corridor' services			
	SEA Objectives	Rating	As with BS1, this measure focuses on overall improvements (through reorganisation of the bus network) to the GDA's overall bus services. As this will be based on no additional infrastructural corridors, the majority of the effects are neutral to positive. Moderately positive effects are predicted for the QoL of commuters (improved journeys times, frequency, reliability, connectivity, timetabling etc.) which is anticipated to have similar improvements for accessibility to economic and employment opportunities. Other minor improvements are expected for designated and undesignated landscapes/townscapes (through the rationalisation of bus stop infrastructure), for access to services and for improvements in air quality and greenhouse gas emissions (as a result in a modal shift to public transport).
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	+1	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.3 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
BS3: New and improved bus fleet			
	SEA Objectives	Rating	This measure is focused on improving capacity on bus routes which are currently at or above capacity. Thus, this measure, while benefitting those on these specific routes, will only positively impact on a small portion of the overall GDA's population. There may be some small mode shift and efficiencies per passenger km in emissions and fuel consumption.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.4 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
BS4: Reduce delays in boarding buses			
	SEA Objectives	Rating	This measure is focused on minimising time delays at the bus-boarding stage of a journey. The main benefit (moderately positive) is for QoL of bus users, who will benefit from much easier bus boarding and also from the subsequent faster journeys and improved journey times. This improvement will also make bus services more attractive, potentially resulting in a modal shift to bus services, thereby resulting in lower air pollution and lower greenhouse gas emissions. Modal shift is likely to be small scale from this measure alone.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.5 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
BS5: More evening and weekend buses			
	SEA Objectives	Rating	This measure is focused on improving the frequency of off-peak bus services. The main benefits are to the QoL of off-peak travellers (including disadvantaged groups), who will have greater off-peak transport frequency and availability. This is also expected to have positive effects for accessibility. However, there are some minor negative effects (on air quality and greenhouse gas production), due to the increased bus mileage in the off-peak (where, per-capita off-peak bus emissions can be higher than the peak-period per-capita emissions). Effectively, these off-peak bus services are unlikely to have a significant impact on modal shift (from car to bus), so the per-capita reduction in air pollution and greenhouse gas emissions (which is positive during the peak period), is expected to be negative during the off-peak.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	-1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	-1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	-1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.6 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
BS6: New bus routes			
	SEA Objectives	Rating	This measure is based on the spatial expansion of the existing bus network in the GDA. This will benefit the residents which will be served by these new bus services. However, the actual numbers served is likely to be small (notwithstanding the positive effects for accessibility and QoL). Minor benefits are expected for air quality and greenhouse gas emissions and use of natural resources.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.7 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
DC1: 'Pay-by-Use' driving charge in GDA			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure would be expected to result in a significant modal shift away from car use and toward the public transport system, due to increased costs associated with private, car-based transport. This would, depending on the levels of charge, be expected to result in significant improvements (i.e. reductions) in air pollution, greenhouse production and fossil fuel consumption as well as supporting the objectives of the Environmental Noise Directive. Lower levels of traffic will also result in improvements to the town and cityscapes and historic streetscapes. It will also encourage greater uptake of softer-modes of transport with possible health benefits from people walking and cycling for more than 30 minutes a day. However, significant negative effects may arise under population as accessibility to employment, services, facilities and amenities is reduced. These negative effects are exacerbated for those on lower incomes and those who are physically, economically and socially disadvantaged. The extent of this effect on accessibility will very much depend on the extent to which any revenue raised from charging is reallocated to expenditure on public transport.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	-2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	-2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+3	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+3	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+3	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+3	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+3	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	+1	

Table A.8 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
DC2: Weekday driver charge in city centre			
	SEA Objectives	Rating	This measure would be expected to result in a significant modal shift away from car use and toward the public transport system, due to increased costs associated with private, car-based transport, although the effects are confined the central area of Dublin city centre. The modal shift will also be lower than that for DC1. This will result in significant improvements (i.e. reductions) in air pollution, greenhouse production and fossil fuel consumption. Lower levels of traffic will also result in improvements to the town and cityscapes and historic streetscapes. It will also encourage greater uptake of softer-modes of transport with possible health benefits from people walking and cycling for more than 30 minutes a day. However, significant negative effects will arise under population as accessibility to employment, services, facilities and amenities is reduced. While a congestion charge will result in a barrier to accessibility for private vehicle users it will allow for increased accessibility for others. These negative effects are acerbated for those on lower incomes and those who are physically, economically and socially disadvantaged. The extent of this effect on accessibility will very much depend on the extent to which any revenue raised from charging is reallocated to expenditure on public transport.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	-2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	-2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+2	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	+1	

Table A.9 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
DC3: Rush hour driver city centre entry charge			
	SEA Objectives	Rating	This measure will result in a modal shift away from car use and toward the public transport system, due to increased costs associated with private, car-based transport during the peak-periods. The effects are confined the central area of Dublin city centre. The modal shift will also be lower than that for DC1 and DC2. This will result in improvements (i.e. reductions) in air pollution, greenhouse production and fossil fuel consumption. It will also encourage greater uptake of softer-modes of transport. However, significant negative effects will arise under population as accessibility to employment, services, facilities and amenities is reduced. While a congestion charge will result in a barrier to accessibility for private vehicle users it will allow for increased accessibility for others. These negative effects are exacerbated for those on lower incomes and those who are physically, economically and socially disadvantaged. The extent of this effect on accessibility will very much depend on the extent to which any revenue raised from charging is reallocated to expenditure on public transport.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	-1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	-1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+2	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	+1	

Table A.10 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
DC4: Provide new tolled roads or toll lanes			
	SEA Objectives	Rating	This measure will result in the new construction of tolled roads, or the development of tolled lanes. This will have negative effects associated with new infrastructure (biodiversity, landscape, water, cultural heritage) and will also increase car-based traffic, resulting in greater air pollution, greenhouse gas production and fossil fuel consumption. The extent and significance of any impacts will depend on the design of the new infrastructure. However, benefits will arise for increasing accessibility through out the GDA and for improving specific car-based commutes (notwithstanding the additional economic cost borne by the user which would be difficult in particular for low income groups).
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	-1	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-2	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	-2	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-2	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	-1	
	10. To minimise safety risks to human health arising from transport related activity.	-1	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	-1	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	-1	
	15. To minimise impacts to coastal systems and resources.	-1	
	16. To minimise impacts to transitional systems and resources.	-1	
	17. To minimise the risk of flooding.	-1	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	-1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	-1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	-1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	-1	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	-1	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	-2	
Material assets	24. To protect public assets and infrastructure.	-1	
	25. To reduce the fossil fuel demand by the transport sector.	-1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-2	

Table A.11 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
DC5: Toll on existing lanes on strategic roads			
	SEA Objectives	Rating	This measure is focused on tolling specific sections of existing strategic roads in the GDA. While there would be some benefits from reduced congestions, there would also be disbenefits arising from increased costs of access which would affect low income groups in particular. Tolling would be expected to result in reduced congestion on strategic routes, but may lead to more traffic using local roads to avoid tolls with consequent adverse effects on congestion and noise.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	-1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	-1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	-1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.12 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
DC6: Lorry Charges (on major roads)			
	SEA Objectives	Rating	This measure is focused on creating a modal shift from HGV to rail-based freight transport. Minor benefits will arise for the landscape, noise, air quality, greenhouse gas production and fossil fuel consumption.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	0	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.13 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
NI1: Better access to stops and stations			
	SEA Objectives	Rating	This measure will improve the physical integration between the different modes of public transport. Positive benefits are expected for accessibility and health (greater use of softer modes of transport, following use of the public transport system). Some small scale modal shift from car to public transport would be expected.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.14 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
NI2: More taxis, flexible minibuss services			This measure is based around improving links to the existing transport network. Benefits are expected for accessibility and QoL.
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.15 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
NI3: Carriage of bicycles on bus / train			
	SEA Objectives	Rating	This measure is aimed at permitting cycles on the bus and rail-related public transport network. Benefits are expected for accessibility and QoL, although these benefits are confined to those who will actually be cycling on the transport system.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.16 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
NI4: One ticket for all public transport			
	SEA Objectives	Rating	This measure is focused on an integrated and multi-modal system ticketing system. It improves accessibility and QoL by making a small number of journeys more affordable due to reduced interchange penalty. Modal shift effects will be positive, but of very small scale and taken to be neutral.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.17 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
NI5: Through fares on public transport			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure is focused on better integration of fares (as opposed to ticketing systems). Modal shift effects will be positive, but of very small scale and taken to be neutral.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.18 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
NI6: Lower fares outside rush hours			
	SEA Objectives	Rating	This measure will reduce off-peak fares. Minor benefits are expected for accessibility and QoL. No significant off-peak increase in travel is expected.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.7 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
NI7: Lower fares at all times			
	SEA Objectives	Rating	This measure will reduce public transport fares at all times. It is anticipated that this measure will result in a greater modal shift (in comparison to NI6: <i>Table A.18</i>) to public transport, thereby resulting in minor benefits for noise, air quality and climate. Moderate benefits are expected for population (i.e. accessibility) through the general lowering of fares. Those on low incomes will especially benefit.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.8 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PE1: Higher quality buses and trains			
	SEA Objectives	Rating	This measure will improve the quality, attractiveness, features of onboard facilities on public transport vehicles, including onboard information. Minor benefits will arise under QoL and safety (in the form of improved security).
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.9 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PE2: Improve main rail / bus stations			
	SEA Objectives	Rating	This measure seeks to improve the physical aspects of interchanges. Benefits expected under landscape (physical improvements around the interchanges), accessibility (encouraging greater use of public transport), QoL and safety (sense of security at interchanges). No significant modal shift from the private car is expected.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+2	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.10 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PE4: Improvements to bus stops			
	SEA Objectives	Rating	This measure seeks to improve the physical aspects of bus stops. Minor benefits expected under landscape (physical improvements around the bus stops), accessibility (encouraging greater use of buses), QoL and safety (sense of security at bus stops). No significant modal shift from the private car is expected.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.23 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
RL3: More evening and weekend trains			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure will improve off-peak rail services with higher off peak frequencies. This assessment assumes that the rail and tram systems are electrical (and not diesel-powered). Benefits are expected for accessibility and significant benefits expected for QoL, but only for commuters who are regular rail-users. This measure will significantly improve the situation, making rail transport a more viable alternative to private vehicles where available. Overall, however, no significant modal shift from roads is expected.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.24 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
RL5: New train and tram lines			
	SEA Objectives	Rating	This measure proposed new rail and tram lines. Given the additional infrastructure required, negative impacts are likely under biodiversity, landscape, water, cultural heritage, soils, geology, waste and (potentially) material assets. However, it is difficult to estimate the severity of these negative impacts at this stage in the assessment process. Once operational, significant positive effects are expected for accessibility, QoL, health (through increased uptake of softer modes of transport, likely to arise as a secondary benefit of the large anticipated modal shift to public transport); air quality, climate change and fossil fuel consumption.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	-1	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-2	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	-2	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-2	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	-1	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	-1	
	15. To minimise impacts to coastal systems and resources.	-1	
	16. To minimise impacts to transitional systems and resources.	-1	
	17. To minimise the risk of flooding.	-1	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	-1	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	-1	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	-2	
Material assets	24. To protect public assets and infrastructure.	-1	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	+1	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-2	

Table A.25 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
RL6: More rail stations / stops			
	SEA Objectives	Rating	This measure is focused on the development of additional stops and stations on existing rail and tram lines. Minor positive impacts are expected for accessibility and QoL, but this is confined to the additional populations who will benefit from these new stops. It would also present opportunities for modal transfer from private car to public transport which will allow for a positive effect on air quality, greenhouse gas emissions and the fossil fuel demand. However, this measure will have minor negative effects on biodiversity, landscape, water resources, soil, geology and cultural heritage.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	-1	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-1	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	-1	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	-1	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	-1	
	15. To minimise impacts to coastal systems and resources.	-1	
	16. To minimise impacts to transitional systems and resources.	-1	
	17. To minimise the risk of flooding.	-1	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	-1	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	-1	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	-1	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-1	

Table A.26 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
RL8: Parking at stations			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure proposed to provide additional car parking at existing or planned rail and Metro stops. However, no additional transport capacity is provided. It is assumed that the provision of parking will result in a modal shift towards rail-based transport and that this will result in noise, air quality and climate benefits. It will also improve accessibility. However, the construction of the additional parking facilities will result in localised impacts to biodiversity, water, cultural heritage, soils & geology and landscape.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-1	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	-1	
	16. To minimise impacts to transitional systems and resources.	-1	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	-1	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	-1	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	-1	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	+1	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-1	

Table A.27 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
RL9: More frequent and bigger trains			
	SEA Objectives	Rating	This measure will increase capacity and frequency on rail-based transport (such as bigger and longer trains and additional rail capacity). It assumes that all works are largely confined to the existing rail alignments, however with four-tacking proposed with this measure, moderately negative impacts might arise along certain corridors. The creation of a significant volume of additional rail-based transport capacity will provide moderate benefits to accessibility, air quality, climate, reducing fossil fuel demand and noise (note that there will be negative impacts along the rail alignments, but these are off-set by the region-wide noise benefits); all as a result of the expected significant modal shift toward rail-based transport. Safety and health benefits are also expected as the lower car volumes should make the softer-modes of transport easier and safer (as well as increase uptake). The provision of greater capacity along rail lines will also increase the viability (and thus potential for redevelopment) of brownfield sites along these rail corridors. The provision of additional rail capacity will have increased energy consumption, but this is significantly smaller than the overall energy saved from the modal shift to PT.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-2	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-2	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	-1	
	13. To minimise impacts to surfacewater systems and resources.	-2	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	-2	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	-1	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	+1	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	+1	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-2	

Table A.28 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
RL10: More frequent trams			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure will increase capacity and frequency on Luas and Metro systems (such as bigger and longer trams and additional rail capacity). It assumes that all works are largely confined to the existing rail alignments. The creation of a significant volume of additional rail-based transport capacity will provide moderate benefits to accessibility, air quality, climate, reducing fossil fuel demand and noise; all as a result of the expected significant modal shift toward rail-based transport. Safety and health benefits are also expected as the lower car volumes should make the softer-modes of transport easier and safer (as well as increase uptake). The provision of greater capacity along rail lines will also increase the viability (and thus potential for redevelopment) of brownfield sites along these rail corridors. The provision of additional tram capacity will have increased energy consumption, but this is significantly smaller than the overall energy saved from the modal shift to PT.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+2	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	-1	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	+1	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	+1	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.11 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
MC1: Motorcycling strategy			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measures seeks to promote and support motorcycling, through means such as free parking provision, permission to use bus lanes and exemption from demand restraint measures (e.g. congestion charging). This measure is expected to have minor positive benefits for accessibility but the small change is not sufficient to have any other changes in the remaining environmental topics (although a small modal shift is expected). Any positive benefits from this small modal shift away from car-based transport (such as noise, air quality etc.) would be off-set by corresponding impacts from increased use of motorcycles.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	0	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.12 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
WN4: River / sea boat services			
	SEA Objectives	Rating	This measure is focused on the development of a water-based public transport system. Minor benefits are expected for accessibility and QoL. Minor negative effects may arise in relation to surfacewater, coastal systems and transitional systems (as there is a risk of hydrocarbon-based pollution of the rivers used by the water taxis).
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	-1	
	16. To minimise impacts to transitional systems and resources.	-1	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.31 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
TM1: Urban traffic management			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure involves the establishment of a road user hierarchy then reallocate road space in accordance with new priorities. This will involve managed restrictions for car traffic in urban centres. A key aspect of this measure is the expected modal shift from car to both the softer modes of transport as well as general public transport. This will result in minor benefits for noise, air quality, climate and fossil fuel consumption. Benefits will also arise for accessibility, health and safety (due to less risks for pedestrians and cyclists), and health benefits (greater uptake of softer modes of transport).
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.32 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
TM2: Traffic signal control and co-ordination			
	SEA Objectives	Rating	This measure seeks to enhance road efficiency through measures to reduce signal delays for all users. Likely actions include adaptive traffic signal control, dynamic signal timings, revised cycle times and traffic/pedestrian phases. This measure is likely to result in improved accessibility for non-car modes of transport (especially pedestrians) and health benefits. Note that it is not envisaged that any modal shift away from car-based transport will be sufficient to have noticeable benefits for noise, air quality etc.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.33 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
TM3: Active traffic management on strategic and major roads			
	SEA Objectives	Rating	The objective of this measure is to enhance the capacity on national roads and motorways. Action may include hard shoulder running, tidal flow operations, ramp metering and incident response. This measure will result in minor benefits for accessibility, due to the greater road capacity and efficiency. However, it is likely to increase car-based modes of transport with resulting minor negative impacts for noise, air quality, greenhouse gas production and fossil fuel consumption. Note that a very large increase in car-usage is not anticipated as a result of this measure, although car use will be made more attractive and there would be some growth in car usage.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	-1	
	10. To minimise safety risks to human health arising from transport related activity.	-1	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	-1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	-1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	-1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	-1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.34 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
MM3: Live public transport information			
	SEA Objectives	Rating	This measure will provide real time passenger information on the public transport network and also at key locations (hospitals, universities, retail centres etc.). Minor positive benefits to arise for accessibility, QoL. Note that it considered that any additional real time signage will not result in any negative landscape impacts, given that such signs will be placed in a suitable setting (e.g. transport interchanges, rail/tram stops, public foyers of retail areas etc.). This measure may result in a small scale modal shift to public transport, taken to be neutral.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.35 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
MM5: Public transport information			
	SEA Objectives	Rating	This measure will provide public transport information and make this easily available and visible at key locations. On-line and printed information also to be easily available (including personalised journey timetables). This measure will improve accessibility and the ease of use regarding public transport. However, it is not envisaged that this measure in isolation will be sufficient to result in a modal shift towards non-car modes of transport. The sector of the population who are likely to greatly benefit from this measure are visitors to the GDA and those in economically deprived areas.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.36 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
MM6: Better signing and wayfinding			
	SEA Objectives	Rating	This measure involves simplifying and improving traffic signs. The objective is to focus on co-ordinated and simplified advanced direction signing on national, strategic and local roads. Softer-modes of transport will also be addressed in this measure. This measure will improve accessibility and ease of navigation around the GDA. However, it is not envisaged that this measure in isolation will be sufficient to result in a modal shift towards non-car modes of transport. The sector of the population who are likely to greatly benefit from this measure are visitors to the GDA. Minor localised landscape benefits will arise due to the rationalisation of on-street signage.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.37 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
MM7: Real-time road user information			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure will make road travel information easily available by internet, mobile phone, in-car devices (SatNav etc.) and on-street live signing. Information provides will include journey time and destination info, such as city centre parking availability. This shall also incorporate the ability to pre-book and/or pre-pay parking and road user charge fees. This measure will improve accessibility, but these minor benefits will largely be confined to those who travel by private car. The diversion of cars on alternative routes (as and when real-time road user information is provided) may result in a noise impacts on lesser-used roads.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	-1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.38 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
RC1: Local road improvements			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure will create additional road capacity at locations where there is excessive demand and congestion. The additional road space will improve accessibility and QoL (for road users). However, as this measure requires new development (i.e. road construction), negative impacts will arise for biodiversity, landscape, water, cultural heritage and waste. This measure will also create additional road space which can be expected to be 'filled' by additional car usage, thereby resulting in negative impacts re air quality, climate change and greenhouse gases.
	2. To support the overall goal of the National Biodiversity Plan.	-1	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-1	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	-1	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	-1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	-1	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	-1	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	-1	
	18. To reduce negative air quality impacts arising from transport-related emissions.	-1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	-1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	-1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	-1	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	-1	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	-1	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	-1	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-1	

Table A.39 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
RC2: New local road links			
	SEA Objectives	Rating	This measure will create additional road links to new development locations. It also proposes to facilitate public transport and soft-modes of transport. This measure proposes significantly greater additional road space and usage compared to RC1. Significantly negative impacts are expected for biodiversity, landscape, water, cultural heritage and waste. This measure will also create additional road space will can be expected to be 'filled' by additional car usage, thereby resulting in significant negative impacts re air quality, climate change and greenhouse gases.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	-1	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-2	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	-2	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-2	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	-1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	-1	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	-1	
	15. To minimise impacts to coastal systems and resources.	-1	
	16. To minimise impacts to transitional systems and resources.	-1	
	17. To minimise the risk of flooding.	-1	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	-2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	-2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	-2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	-2	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	-1	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	-2	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	-2	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-2	

Table A.40 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
RC4: Widening 'strategic' roads			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure will create additional road space (i.e. road widening) along strategic roads. Significantly negative impacts are expected for biodiversity, landscape, water, cultural heritage and waste. This measure will also create additional road space which can be expected to be 'filled' by additional car usage, thereby resulting in significant negative impacts on air quality, climate change and greenhouse gases. A key assumption in this assessment is that the new road infrastructure will not impact on designated sites, such as SACs – it is not possible to determine this at this point in the environmental assessment.
	2. To support the overall goal of the National Biodiversity Plan.	-1	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-2	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	-2	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-2	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	-1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	-1	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	-1	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	-1	
	18. To reduce negative air quality impacts arising from transport-related emissions.	-2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	-2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	-2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	-2	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	-1	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	-2	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	-2	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-2	

Table A.41 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
RC5: New main roads and bypasses			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure will create additional strategic road links and bypasses. Significantly negative impacts are expected for biodiversity, air, noise, landscape, water, cultural heritage and waste. This measure will also create significant additional road space which can be expected to be 'filled' by additional car usage, thereby resulting in significant negative impacts on air quality, climate change and greenhouse gases. A key assumption in this assessment is that the new road infrastructure will not impact on designated sites, such as SACs – it is not possible to determine this at this point in the environmental assessment.
	2. To support the overall goal of the National Biodiversity Plan.	-2	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-3	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	-3	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-3	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	-2	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	-1	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	-1	
	18. To reduce negative air quality impacts arising from transport-related emissions.	-2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	-2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	-2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	-2	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	-1	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	-3	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	-2	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-3	

Table A.42 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
RC6: New River/Canal crossings			
	SEA Objectives	Rating	This measure proposes additional crosses of canals/rivers/bays etc so as to relieve pressure and congestion at existing crossing points. This will have negative effects associated with new infrastructure (biodiversity, landscape, water, cultural heritage). Due to the fact that it is assumed that the bridges will be designed for vehicles, whilst also accommodating walking and cycling it will also increase car-based traffic, resulting in greater air pollution, greenhouse gas production and fossil fuel consumption. Positive impacts will occur due to the increased accessibility and the improvement of QoL for residents, workers and visitors to the GDA.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	-1	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-2	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	-2	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-2	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	-1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	-1	
	13. To minimise impacts to surfacewater systems and resources.	-2	
	14. To minimise impacts to groundwater systems and resources.	-1	
	15. To minimise impacts to coastal systems and resources.	-1	
	16. To minimise impacts to transitional systems and resources.	-1	
Air	17. To minimise the risk of flooding.	-1	
	18. To reduce negative air quality impacts arising from transport-related emissions.	-1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	-1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	-1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	-2	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	-1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-2	

Table A.43 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
SS3: Build residential 'Home Zones'			
	SEA Objectives	Rating	This measure will result in the designing of residential streets in which the road space is shared between drivers and other road users with the wider needs of residents in mind. This will result in a positive effect on the QoL of residents, workers and visitors to the GDA and will result in an increase in cycling and walking. Overall, due to less car movements in residential areas, there will be positive impacts on landscape, noise and air.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+2	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
Water	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.44 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
SS6: Pedestrian areas in town centres			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure aims to provide pedestrianisation and shared spaces in commercial and local centres. This will have a positive effect on designated, undesignated and protected townscapes and conservation areas due to the reduction of traffic and its polluting effects.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	+2	The reduction in the number of vehicles in the key centres will also result in a reduction in the amount of noise pollution generated. There will also be positive effects on health as some transport users will switch from private transport to travel by foot and by bicycle within the key centres and will reduce the number of accidents within key centres. The reduction in the amount of commuters travelling into key centres in private vehicles will result in positive effects on the air quality and climate. Similarly this measure will result in a reduction in the fossil fuel demand, as more people switch to bicycle, pedestrian and public transport. This measure will also reduce impacts to cultural, and architectural within key centres. It will also allow for sites which are currently used for car-parking to be reused and regenerated.
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+2	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	0	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+2	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	+1	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	+1	

Table A.45 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
SS7: Look after streets better			
	SEA Objectives	Rating	This measure, which will focus on making improvements to and maintaining streetscapes, will result in a moderate positive effect on undesignated landscape resources, especially streetscapes. This measure will also result in better conditions for cycling and walking and will thus have a minor positive effect on the QoL and lead to higher levels of exercise (cycling and walking) and health improvements. The improving and maintaining streetscapes includes repairing road surfaces and removal of obstructing signage. This will improve the safety conditions, especially for cyclists, and thus will have a minor positive effect regarding the minimisation of safety risks to human health.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+2	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.46 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
FM1: Tax value of land, not property			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure will result in a maximisation of the use of land, higher densities where land values are higher, e.g. close to public transport. This measure will lead to better use of land through the use of higher densities. This will minimise land utilisation and therefore have a minor positive effect on the minimisation of impacts on undesignated landscape resources. By discouraging unsustainable development of land it may result in minor positive impacts on noise, air and climate. Overall, this measure will result in better land use which in turn will facilitate greater access to transport and thus have a minor positive effect on accessibility to economic and employment opportunities, and quality public, cultural and community services. It will also afford protection of public assets and infrastructure, i.e. encouraging development adjacent to public transport nodes and therefore have a minor positive effect on public assets and infrastructure. There will also be a moderate positive effect due to it being able to directly promote and encourage the reuse and regeneration of brownfield sites.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	0	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	+1	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	+2	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.47 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
FM3: Increase taxes on motoring			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	An increase in Vehicle Registration Tax and Road Tax will lead to a reduction in car ownership, especially cars with higher CO2 emissions (if VRT is directly linked to CO2 emissions) and a modal shift from cars to public transport. While this will result in minor positive effects on air quality, greenhouse gas emissions fossil fuel use and support the Environmental Noise Directive, it will conversely have moderate negative effects for those who are physically, economically or socially disadvantaged and rely on private vehicles, and cause some hardship for those who use private vehicles to commute to and from employment or use their vehicles for employment purposes.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	-2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	-2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	-1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.48 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
FM4: Fuel or carbon taxes			
	SEA Objectives	Rating	The positive effects of a fuel tax will include the reduction in the use of private vehicles for short trips, and thus encourage more walking and cycling, with their associated health benefits. It may be expected to also lead to moderate positive effects for landscape, air quality, support the objectives of the Environmental Noise Directive, reduce greenhouse gas emissions and reduce fossil fuel demand. However, it will also result in barriers to accessibility, particularly for those who are physically, economically or socially disadvantaged and will significantly affect those who use private vehicles for accessing economic and employment opportunities, and public, cultural and community facilities. Overall an increase in fuel taxes will have a minor positive effect on QoL due to the reduction in use of private vehicles and the resulting faster trips. The overall effect will depend very much on the scale or magnitude of the fuel tax.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	+1	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	-2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	-2	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+2	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.49 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
IG1: Better located Government developments and facilities			
	SEA Objectives	Rating	<p>The strategic locating of Health Facilities, Education Facilities and Industrial/Employment Facilities will lead to a reduction in the need to travel and will increase accessibility. There will be moderate positive effects, particularly for those who are physically, economically and socially disadvantaged due to the increased accessibility to necessary facilities. There will also be a minor positive effect on the QoL due to easier access to facilities strategically located and served by adequate public transport systems. The reduction in the need to travel as a result of this measure will also support the objectives of the Environmental Noise Directive. The reduction in the need to travel by private vehicles will also lead to a reduction in greenhouse gas emissions as people attracted to the facilities will be adequately provided with public transport, cycling and walking options. For similar reasons there will be a reduction in the negative air quality impacts arising from transport-related emissions, ensure compliance with Air Framework Directive, and a reduction in fossil fuel demand as more people switch to public transport. The location and design of these facilities will also provide minor positive effects for the reuse and regeneration of brownfield sites.</p>
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	+1	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.50 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PM2: More 'mixed use' development			
	SEA Objectives	Rating	This measure focuses on locating development closer to places of work, education, retail and leisure, and will reduce the need to travel and the distances travelled. This will have a minor positive effect on undesignated landscape resources. There will also be moderately significant positive effects due to the increased accessibility to economic and employment opportunities, and quality public, cultural and community services. Due to the fact that this measure will lead to shorter and less frequent trips there will be a moderate positive effect on QoL. The shorter trips which would result from the implementation of this measure will result in greater utilisation of softer modes of transport, especially walking and cycling, and thus have a minor positive effect on health. As a result of reduced need to travel there will also be moderate positive effects for air quality, reduction in greenhouse gas emissions and a reduction in the fossil fuel demand. It will also lead to a minor positive effect on the reuse and regeneration of brownfield sites and supporting the Environmental Noise Directive.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	+1	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.51 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PM3: Mixed housing types in schemes			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	An increase in the variety of housing will lead to reduced need to relocate in the event of household size increasing or decreasing. It will facilitate people living closer to their places of education, employment, etc. Therefore there will be positive effects on the accessibility to economic and employment opportunities, and quality public, cultural and community services as well as supporting the objectives of the Environmental Noise Directive, reducing greenhouse gas emissions and reducing the fossil fuel demand. This measure will reduce the number of times households must relocate outside of their existing communities for accommodation purposes, and overall will facilitate the development of stronger and more diverse communities. Overall, it will reduce the need to travel. Therefore it will have a moderate positive effect on the QoL, especially for residents.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.52 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PM4: More accessible housing estates			
	SEA Objectives	Rating	The provision of direct walking and cycling networks will have positive effects on the accessibility of economic and employment opportunities, and quality public, cultural and community serves, especially for persons who are economically or socially disadvantaged. It will also increase the QoL due to the ease of access to facilities and stimulate higher levels of physical exercise (walking and cycling) and therefore have a minor positive effect on the health improvement and benefit objective. This measure will also minimise safety risks to human health, especially to that of walkers and cyclists. The provision of cycling and walking networks will also reduce the need to travel by private vehicle, especially for short trips, and will therefore have minor positive effects on landscape, the objectives of the Environmental Noise Directive, on the air quality, on the reduction of greenhouse gas emissions and the reduction of the fossil fuel demand.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	+1	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.53 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PM6: Make developers improve transport			
	SEA Objectives	Rating	Evaluating impacts and securing developer contributions in order to ensure sustainable modes of transport in all new developments will have a positive effect. It will facilitate improvements in accessibility, especially via public transport. It will also contribute to the QoL for residents, workers and visitors to the GDA and will thus have a minor positive effect on this objective. The mitigation of adverse transport impacts and the associated increase in use of public transport, which this measure will result in, will lead to minor positive effects on landscape, the air quality and on the reduction of greenhouse gases and the fossil fuel demand.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	+1	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.54 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PM9: Offices, shops etc near stations			
	SEA Objectives	Rating	This measure, which focuses on encouraging and directing high density trip intensive developments towards locations that are easily accessed via public transport, will reduce the impacts felt by undesignated landscape resources. It will also allow for easier access to the facilities and thus enhance the accessibility of physically, economically and socially disadvantaged communities within the GDA and overall improve the QoL of residents, workers and visitors to the GDA and therefore have moderate positive effects on these objectives. The concentration of services and facilities at locations served by public transport will also lead to a reduction in the need to travel by private vehicles, and thus lead to an improvement in air quality, a reduction in greenhouse gas emissions and fossil fuel demand and support the objectives of the Environmental Noise Directive. Due to a policy of high density there will be positive impacts on the reuse and regeneration of brownfield sites and the protection of public assets and infrastructure.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	+2	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	+1	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.55 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PM10: Homes close to public transport			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	By concentrating denser residential development in areas accessible by public transport it will provide for easier access to services/facilities, especially for those who are physically, economically or socially disadvantaged and will have a moderate positive effect on these objectives as well as enhancing the QoL. The increased accessibility of these residential developments will lead to a reduction in the need to travel by private vehicle and thus have moderate positive effects on the air quality and the reduction of greenhouse gas emissions. This measure will result in a significant modal shift to public transport, walking and cycling and will therefore reduce the fossil fuel demand and support the objectives of the Environmental Noise Directive. A policy of higher residential densities in the areas where public transport is readily available will also protect public assets and infrastructure and encourage the reuse and regeneration of brownfield sites.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	+2	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	+1	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.56 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
SC6: Personal journey planning			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	Individualised travel planning and marketing measures have the potential to shift private vehicle users to more sustainable modes of transport. It has the potential to inform people of their wider transport choices which may lead to easier means of transport and hence have a minor positive effect on accessibility to economic and employment opportunities, quality public, cultural and community facilities and QoL. It will result in increased numbers of people walking and cycling and will thus have positive health benefits. A switch from private vehicles to public transport, walking and cycling will also lead to minor positive effects associated with improvements in air quality as well as reductions in greenhouse gas emissions and fossil fuel demand.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.57 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
SC8: Develop Car clubs			
	SEA Objectives	Rating	The provision of car clubs would have minor positive effects with regards to accessibility, especially for those who are physically, economically or socially disadvantaged. They would provide a flexible, cheap alternative to private car ownership. Some journeys may be made shorter/improved through the use of car club cars and therefore there will be a minor positive effect on the QoL objective. This measure will reduce the number of cars and the demand for space for car parking and is likely to have minor positive impacts on landscape, the support of the objectives of the Environmental Noise Directive, air quality, greenhouse gas emissions and the fossil fuel demand.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	+1	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.58 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
SC10: On-line working etc.			
	SEA Objectives	Rating	This measure, which aims to reduce the need to travel for purposes such as employment, education, retail, etc., will result in a greater QoL and will reduce the amount of transport necessary, thus having a minor positive effect and reducing the amount of air pollutants associated with transport, reducing greenhouse gas emissions and reducing the fossil fuel demand.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.59 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
SC11: Mobility management planning			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure seeks to promote sustainable transport planning across the GDA, via the various businesses, institutions and sites. This will increase the accessibility to economic and employment opportunities, and to quality, public, cultural and community services. This will be a moderate positive effect, especially for those who are physically, economically or socially disadvantaged. It will also reduce the amount of car-based transport through the promotion of public transport options. This measure is also expected to lead to increased levels of cycling and walking and will thus have a minor positive effect on health. The anticipated modal shift away from car-based transport will have minor positive effects on air quality, noise, reduction in greenhouse gas emissions and the reduction in fossil fuel demand.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.60 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
SC12: Promotion of sustainable travel			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure is primarily focused on various educational and marketing-based objectives. Key areas will be on improving driver behaviour; general education and awareness of more sustainable forms of travel and transport; and greater promotion of the cycling, walking and public transport. This measure will result in minor benefits for accessibility (principally for populations who are economically deprived) and a more pleasing transport journey experience (QoL). However, although some shift towards non-car modes of transport are likely, it is not expected that this will be sufficient to result in positive benefits for noise, air quality etc.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.61 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
WS5: Improve pedestrian facilities			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	Improvements to the walking network will facilitate increased levels of walking and will improve the overall accessibility of economic and employment opportunities and quality public, cultural and community services. It will also have minor positive effect on the QoL of residents, workers and visitors in the GDA, as well as health improvements and benefits associated with increased exercise levels. An increase in walking, facilitated by an improved walking network, will also have positive effect on the landscape, air quality and, as private vehicle users switch to walking for shorter trips, will reduce both greenhouse gas emissions and reduce the fossil fuel demand.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	+1	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.62 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
CY8: Improve / extend cycle routes			
	SEA Objectives	Rating	This measure seeks to improve the provision of cycle networks. An improved cycle network will result in improved access to economic and employment opportunities, and quality public, cultural and community services. This measure, which will lead to increased levels of cycling, will have minor positive effects on the QoL and will lead to health improvements and benefits due to the increased levels of physical exercise. The reduction in private vehicle use for the purpose of short journeys will also have positive effects on air quality and reduce greenhouse gas emissions and reduce the fossil fuel demand.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.63 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
CY9: Provide secure cycle parking			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure focuses on the provision of secure cycle parking facilities. The increased security of bicycle parking facilities will allow for increased levels of cycling which in turn will lead to a minor positive effect on the QoL of residents, workers and visitors to the GDA as well as resulting in health improvements and benefits. Due to the increased availability of secure cycle parking facilities more people will chose to cycle rather than drive, especially for shorter trips.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.64 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
CY10: On-street bicycle rental			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure, which aims to provide cycle rental schemes throughout the GDA at strategic locations, will result in minor positive effects on accessibility to economic and employment opportunities, and quality public, cultural and community services. It will also lead to minor positive effects for QoL and support health improvements and benefits. However, this measure will result in an increase in the number of accidents associated with cycling, especially by users who are unfamiliar with or are not trained for cycling in a city environment.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	-1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.65 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
FS4: More non-road carriage of freight			
	SEA Objectives	Rating	This measure is based on the transfer of freight from the roads to rail/light rail and waterwaterways. The use of waterways for the shipment of freight will result in moderate negative effect on biodiversity within the water-based habitats as well as having a moderate negative effect on the surfacewater systems and the objectives of RBMP, POM and the WFD. It will also have a minor negative effect on the coastal and transitional water systems. However, a minor positive effect will be perceived by the residents, workers and visitors to the GDA as road freight would be reduced due to the use of the alternative modes. The reduced congestion on town and city streets will result in an increase in the QoL. It will also reduce the amount of noise perceived on the streets of the city and town as the noisy freight vehicles are removed. Minor positive effects will also be seen with regards to air quality, reduced greenhouse gas emissions and reduced fossil fuel demand.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-2	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	-2	
	13. To minimise impacts to surfacewater systems and resources.	-2	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	-1	
	16. To minimise impacts to transitional systems and resources.	-1	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.66 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
FS5: Strategic freight network			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure will designate a strategic freight network linking sources of materials, manufacturing and warehousing locations with ports, airports and inter-regional/international motorways. It will improve lorry access and journey times to and from these routes and at ports/airport. Other elements include freight-specific lanes and local widening to maximise freight road-capacity. This measure will improve accessibility, QoL, reduce accident risks and promote health benefits through diverting freight-based traffic to the strategic freight network. This will reduce HGV and associated traffic on the public road network, improving overall journey times and making this environment more attractive to the shorter modes of transport. Localised improvements in air quality and noise are anticipated where freight traffic is diverted away from, especially residential areas. However, there will be minor negative impacts (biodiversity, water, cultural heritage etc.) from the construction of the distribution centres.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-1	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
Human Health	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	-1	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-1	

Table A.67 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
FS6: Sustainable distribution and servicing strategy			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure will restrict where and when lorries can enter city and town centres by using permits and enforcement of waiting/loading restrictions. It will also provide facilities to transfer goods from HGVs to smaller environmentally-friendly vehicles at edge of urban areas for onward transportation to town and city centres. Minor positive effects are anticipated for local landscapes, noise and air quality as there will be small delivery vehicles in the urban areas. This will also make the wider road-network a more pleasant environment for cyclists and pedestrians. The environmentally-friendly nature of the replacement vehicles will also result in moderate benefits for air quality and additional minor benefits for fossil fuel consumption and greenhouse gas production. However, there will be minor negative impacts (biodiversity, water, cultural heritage etc.) from the construction of the distribution centres.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-1	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	+1	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	-1	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-1	

Table A.68 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PS1: More commuter car parking			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure which focuses on providing on street and off-street long stay parking as opposed to at-workplace parking would be expected to result in lower levels of private vehicle use. Commuters who travel to work by private car will be deterred from doing so due to the difficulty in finding car parking within a reasonable distance of the place of employment. However, it is anticipated that all allocated spaces will be used by those who must travel to work by private vehicle and who are willing to pay or whose employers are willing to pay for the parking. Due to the fact that this measure is likely to lead to a reduction in the amount of car trips into urban centres it will facilitate an improvement of the QoL. There will be a minor positive effect on health as commuters who continue to travel to urban centres in private vehicles will have to walk to their place of employment from where they park their cars. There will be a minor positive impact on landscapes where this measure is implemented due to reduced levels of traffic. While congestion may be reduced in the areas where this measure is used, it may create additional congestion in areas where private car users try to avoid the measure. The impact of this measure on noise, air quality, greenhouse gas emissions and fossil fuel demand is likely to be negligible due to the fact that the majority of users of parking at work will shift to on street and off-street long stay parking.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	+1	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.69 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PS3: Control on-street parking stays			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure which aims to impose levies and charges on retail parking will result in lower levels of private vehicles for shopping purposes. This measure will have a minor negative effect on the accessibility of quality public, cultural and community services, and will particularly affect those who are physically disadvantaged. However, this measure will also lead to improved air quality, reduced greenhouse gas emissions and reduced fossil fuel demand.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	-1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	0	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.70 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PS4: Park-and-ride on bus			
	SEA Objectives	Rating	This measure which is based on the provision of bus-based park and ride will result in a reduction in the amount of private vehicle usage. It will have minor positive effects on the accessibility of economic and employment opportunities and public, cultural and community services. Due the reduced amount of private vehicle usage there will be minor positive effects for air quality and a reduction in the amount of greenhouse gas emissions and a reduction in the fossil fuel demand. It has been assumed that appropriate sites would be available for park and ride facilities without encroachment into areas of environmental value. However, due to construction and the permanent land-take necessary for a park and ride facility there is a potential for negative impacts on biodiversity, landscapes, water and cultural heritage, depending on the location of park and ride sites and any environmental mitigation which can be implemented .
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	-1	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	-1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	-1	
	13. To minimise impacts to surfacewater systems and resources.	-1	
	14. To minimise impacts to groundwater systems and resources.	-1	
	15. To minimise impacts to coastal systems and resources.	-1	
	16. To minimise impacts to transitional systems and resources.	-1	
	17. To minimise the risk of flooding.	-1	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	-1	

Table A.71 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PS7: Limit parking in developments			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure, which is based on the parking standards applied to new developments, will reduce the amount of private vehicle usage. It will lead to minor positive effects on undesignated landscape resources, especially townscapes, as parking within these areas, and thus number of cars will be reduced. However, this measure will also reduce the accessibility of economic and employment opportunities, and quality public, cultural and community services, through the reduction of parking provision. This measure while making things more difficult for those who use private vehicles will increase the QoL for those who walk, cycle or use public transport. For this reason its effect on QoL is rated as 0. This measure will encourage a modal shift to softer modes of transport and will have a positive effect on health due to the shift to walking and cycling. This measure will also have minor positive effects for air quality and reduce the amount of greenhouse gas emissions and reduce the fossil fuel demand.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	-1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	-1	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	0	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	+1	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.72 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
PS9: Limit commuter car parking			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	This measure aims to reduce the amount of private vehicle usage by limiting and restricting on street long stay parking. This will reduce the amount of private vehicle trips and shift commuters onto more sustainable modes of transport. A reduction in commuter parking will have a minor negative effect on the accessibility of economic and employment opportunities. While there will be minor negative effects suffered by those who rely on cars, due to the restrictions on parking, there will be minor positive effects for the local residents. Therefore, this measure will result in a rating of 0. As a consequence there will be a moderate positive effect on air quality, a reduction in greenhouse gas emissions and a reduction in fossil fuel demand due to the significant shift from private vehicles to public transport, and other softer modes.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	-1	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	0	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.73 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
SI3: Physical access improvements			
	SEA Objectives	Rating	
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	The implementation of measures in order to improve the accessibility of the transport system to mobility impaired persons will result in moderate positive effects with regards to access to economic and employment opportunities, quality public, cultural and community services and will also have a moderate positive effect on the QoL of residents, workers and visitors to the GDA, especially for mobility impaired people. It will also have a moderate positive effect with regards to the minimisation of risks to human health, through the reduced chance of accidents.
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+2	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+2	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	+2	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	0	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	0	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	0	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.74 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
SI4: Access to community facilities			
	SEA Objectives	Rating	This measure aims to improve accessibility to key facilities. It will result in major positive effects on accessibility to economic and employment opportunities, and quality public, cultural and community facilities. In turn it will also have a moderate positive effect on the QoL of residents, workers and visitors to the GDA. Enhanced access by public transport will reduce reliance on private vehicles and thus have a moderate effect on supporting the objectives of the Environmental Noise Directive. It will lead to increased use of public transport as well as walking and cycling, and thus have a moderate positive effect on air quality, reduction of greenhouse gas emissions and a reduction of the fossil fuel demand.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	+3	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	+3	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+2	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+2	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+2	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+2	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.75 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
TE1: 'Eco-friendly' vehicles			
	SEA Objectives	Rating	The roll-out of Eco-vehicles will see minor positive effects with regards to noise, air quality and will reduce carbon emissions and reduce the fossil fuel demand. However, these effects will be somewhat offset due to the fact that the electricity used to fuel the Eco-vehicles will likely come from domestic electricity generation (mostly non-renewable and greenhouse gas emitting).
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	0	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
Air	17. To minimise the risk of flooding.	0	
	18. To reduce negative air quality impacts arising from transport-related emissions.	+1	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+1	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

Table A.76 Themes & Measures environmental assessment table

Strategy Intervention			Discussion of impacts
TE2: Low Emissions Zone controls			
	SEA Objectives	Rating	This measure which aims to prohibit the most polluting vehicles from travelling within particular low emission zones will have major positive effects on the air quality objectives. It will also have a minor positive impact on the reduction of greenhouse gas emissions and the reduction of the fossil fuel demand due to the fact that it will be necessary to shift to softer modes of transport in order to access the low emission zones.
Biodiversity Flora & fauna	1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	0	
	2. To support the overall goal of the National Biodiversity Plan.	0	
	3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	
Landscape	4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	0	
	5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	0	
Population	6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	0	
	7. To increase accessibility to quality public, cultural and community services, in particular, for those who are physically, economically or socially disadvantaged within the GDA.	0	
Human Health	8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	0	
	9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	0	
	10. To minimise safety risks to human health arising from transport related activity.	0	
	11. To support health improvements and benefits from transport-related activities.	0	
Water	12. To support the forthcoming River Basin Management Plans (RBMP) and Programme of Measures (POM). Where these are not available, the objective is to support the aims and objectives of the Water Framework Directive (WFD)	0	
	13. To minimise impacts to surfacewater systems and resources.	0	
	14. To minimise impacts to groundwater systems and resources.	0	
	15. To minimise impacts to coastal systems and resources.	0	
	16. To minimise impacts to transitional systems and resources.	0	
	17. To minimise the risk of flooding.	0	
Air	18. To reduce negative air quality impacts arising from transport-related emissions.	+2	
	19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	+2	
Climate	20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	
Soils & geology	21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	
	22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	
	23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	
Material assets	24. To protect public assets and infrastructure.	0	
	25. To reduce the fossil fuel demand by the transport sector.	+1	
	26. To assist with the reuse and regeneration of brownfield sites.	0	
Cultural Heritage	27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	

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