

NTA Integrated Implementation Plan 2013-2018



SEA Statement

CONTENTS

1. Introduction	3
2. The Integrated Implementation Plan	4
2.1 Overview	4
2.2 Overall Programme Approach	4
2.3 Main Components of the Plan	4
3. How Environmental Considerations have been Integrated into the Draft Plan	9
3.1 Stages in the SEA Process	9
3.2 Integration of the Plan and SEA	10
4. Consultation	12
4.1 Summary of Submissions Received and NTA Responses	12
5. Post-Consultation Updates	18
5.1 Introduction	18
5.2 Changes to the Plan as a Result of Consultation	18
5.3 Changes to the Environmental Report as a Result of Consultation	19
5.4 Changes to the Appropriate Assessment Screening Report and Natura Impact Statement	23
5.5 Screening of Changes to the Plan	26
6. Consideration of Alternatives	27
6.1 Overview of the Alternative Packages	27
6.2 Alternatives Assessment Results	28
6.3 Summary of Alternatives Results	30
6.4 Development of Preferred Draft Integrated Implementation Plan	30
7. Monitoring	31
7.1 Introduction	31
7.2 Proposed Monitoring Programme	31

1. Introduction

The Integrated Implementation Plan 2013-2018 sets out the investment priorities for transport in the Greater Dublin Area for the 6 year period of the plan. During the Plan's development, a parallel SEA process was undertaken in line with the SEA Directive and Regulations. This ensured that environmental considerations were fully integrated into the plan-making process.

The main output of the SEA process is the Environmental Report, a draft of which was published in August 2013, along with the Draft Integrated Implementation Plan. A final Environmental Report, which takes account of submissions received during the period of consultation, has been published with the Final Integrated Implementation Plan. In accordance with Section 16 (2) (b) of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004, this SEA Statement has also been prepared.

The EPA Guidance state than an SEA Statement should summarise the following:

- how environmental considerations have been integrated into the Plan;
- how the Environmental Report, submissions, observations and consultations have been taken into account during the preparation of the Plan;
- the reasons for choosing the Plan adopted in the light of other reasonable alternatives dealt with; and,
- the measures decided upon to monitor the significant environmental effects of implementation of the Plan.

This document comprises this statement following the adoption of the Integrated Implementation Plan and, in line with the regulations and guidance, provides the information listed above.

In addition to the SEA process, the Plan was subject to an Appropriate Assessment. While the findings of this process are set out in the accompanying Natura Impact Statement, the close link between the two processes mean that much of the findings in relation to Natura 2000 sites are of relevance to the SEA.

2. The Integrated Implementation Plan

2.1 Overview

The Government published its capital programme in November 2011 titled *“Infrastructure and Capital Investment 2012 – 2016: Medium Term Exchequer Framework”*. That programme set out the Government’s capital investment priorities over the five years of the programme. The total public transport investment set out in the programme is €1,428 million over the period 2012 to 2016.

Under that capital investment framework, the amount allocated to public transport infrastructure in the GDA is €715 million to the end of 2016. While the Government’s *“Infrastructure and Capital Investment 2012 – 2016”* sets out investment for the years to the end of 2016, it is required that this Plan will extend to a six year period, to the end of 2018. In line with the provisions of Section 13(4) of the Dublin Transport Authority Act 2008, guidance has been obtained from the Department of Transport, Tourism and Sport indicating that projected figures may be used for proposed capital expenditure for 2017 and 2018. While no commitment has been given in relation to funding in those later years, the Plan has assumed a similar level of funding for those years to that proposed for 2016.

Accordingly, the Authority has prepared this Plan on the basis of the following funding profile:

	2013	2014	2015	2016	2017	2018	Total
Funding (€ m)	140.6	149.2	145	150	150	150	884.8

2.2 Overall Programme Approach

The Infrastructure Investment Programme forms an integral and central part of the plan. Over the six year period of the plan, close to €900 million will be invested in public transport infrastructure and related cycling/walking infrastructure. The overall Infrastructure Investment Programme is divided into four sub-programmes. These are:

1. Bus;
2. Light Rail;
3. Heavy Rail; and
4. Integration Measures and Sustainable Transport.

Each of these sub-programmes is addressed in turn in the following sections, with details provided on the projects intended for delivery under that sub-programme.

2.3 Main Components of the Plan

2.3.1 Integration of Land Use and Transport

As part of this plan, the Authority promotes and seeks to implement the following land use principles:

- High volume, trip intensive developments, such as offices and retail, should primarily be focussed into Dublin City Centre and the larger Regional Planning Guidelines higher order centres within the GDA;
- The role and function of district centres and neighbourhood centres should be supported and promoted in order to exploit the levels of accessibility offered by public transport, walking and cycling at these locations. This relates to providing for an appropriate scale of development in these centres which would not undermine development potential in Dublin City Centre or the larger Regional Planning Guidelines higher order centres;
- Except in limited circumstances such as specific physical requirements, trip intensive developments or significant levels of development should not occur in locations not well served by high quality public transport;
- All non-residential development proposals in the GDA should be subject to maximum parking standards. These should be set by the local authorities in the GDA in consultation with the Authority and should vary spatially on the basis of centrality and the level of public transport provision;
- In locations where the highest intensity of development occurs, an approach that caps car parking on an area-wide basis should be applied; and
- For all major employment developments and all schools, travel plans should be conditioned as part of planning permissions and be carried out in a manner consistent with existing guidance
- Residential development located proximate to high capacity public transport should be prioritised over development in less accessible locations in the GDA;
- To the extent practicable, residential development should be carried out sequentially, whereby lands which are, or will be, most accessible by walking, cycling and public transport – including infill and brownfield sites – are prioritised; and
- The strategic transport function of national roads, including motorways, should be maintained by limiting the extent of development that would give rise to the generation of local car traffic on the national road network
- Planning at the local level should promote walking, cycling and public transport by maximising the number of people living within walking and cycling distance of their neighbourhood or district centres and public transport services;
- New development areas should be fully permeable for walking and cycling and the retrofitting of walking and cycling facilities should be undertaken where practicable in existing neighbourhoods in order to give competitive advantage to these modes;
- Development proposals should exploit opportunities to enhance the effectiveness of transport investment;
- The density of employment development should maximise the potential for walking, cycling and public transport;
- Where possible, developments should provide for filtered permeability which provides for walking, cycling, public transport and private vehicle access but which restricts or discourages private car through trips; and
- To the extent practicable, proposals for right of way extinguishments should only be considered where these do not result in more circuitous trips for local residents accessing public transport or local destinations.

These principles are consistent with, and may be regarded as the extension of, prevailing national transport and planning policy. These are also given statutory footing via the Regional Planning Guidelines, Development Plans and Local Area Plans of the seven Local Authorities in the GDA. It is not the intention of this SEA to assess the impact of each of these principles in a specific spatial manner, as this is done via the Development Plan and Local Area Plan processes which zone land.

Instead, this SEA will assume these principles as intrinsic to the plan and will assess them in an appropriately broad and generalised manner.

2.3.2 Bus

The proposals in relation to Bus investment are encompassed in four investment areas:

- Bus Fleet Investment;
- Bus Stop and Shelter Provision;
- General Bus Network Improvements; and
- Bus Rapid Transit Schemes.

The area of most concern for the SEA is Bus Rapid Transit as this will require investment in infrastructure and will potentially have significant environmental impacts. It is proposed to progress the development of three BRT routes as part of this Plan. These are:

- Swords / Airport to City Centre;
- Blanchardstown to N11 (UCD); and
- Clongriffin to Tallaght.

It is envisaged that planning consent will be achieved for each of these projects in the early years of the Plan. Subsequent implementation of these schemes will be progressed on an incremental basis in accordance with available funding.

2.3.3 Light Rail

The proposals in relation to light rail investment are encompassed in two investment areas:

- Luas Cross City; and
- Fleet and Network Enhancement.

The Luas Cross City scheme is the main focus of the SEA as it requires significant intervention in the environment of the City Centre and north west inner suburbs. This is the largest public transport project to be constructed during the period of the Plan. This scheme comprises a broadly north / south Luas line extending from St. Stephen's Green in the south to connect to the Maynooth Rail line at Broombridge in Cabra at its northern end. With an overall length of approximately 5.6km, it will have thirteen stops along its route, including one at the major new DIT campus at Grangegorman.

Luas Cross City was approved by An Bord Pleanála in 2012 and construction commenced in June 2013. It has been through the Environmental Impact Assessment and Appropriate Assessment processes and, while it has been incorporated into this plan and SEA process, it is not the intention to revisit the merits and demerits of this project, rather to highlight those aspects which contribute to the assessment of the plan's impact on the environment.

2.3.4 Heavy Rail

The proposals in relation to heavy rail investment are encompassed in seven investment areas:

- City Centre Resignalling Project;
- Phoenix Park Tunnel Link;

- Level Crossing Programme;
- Ticketing / Revenue Systems;
- Central Traffic Control;
- Station Improvement / Other Enhancements Programme
- Network Development.

Of these proposals, the critical ones in terms of environmental impact are the re-use of the Phoenix Park tunnel, construction of new stations and some network development projects. Enhancements such as the City Centre Resignalling programme and other developments in terms of the promotion of rail will be taken into account by the generalised assessment of the impact of increased rail frequency and associated potential increases in passenger numbers.

New stations are to be opened at Heuston West – as part of the reopening of the Phoenix Park Tunnel, Kishoge and Pelletstown. Kishoge has already been constructed. Pelletstown is currently at planning application stage and Heuston West will be designed and planned as the tunnel project develops.

Given the funding needs of other investment areas in the overall programme, it is unlikely that any significant network development will be completed during the period of the Plan. However, planning and design work will be progressed on certain rail projects with a view to those projects being available for commencement should additional funding become available for such schemes.

The relevant projects are:

- Electrification and Resignalling from Malahide to Balbriggan; and
- Maynooth Line Electrification and Resignalling.

The electrification and resignalling of the northern line between Malahide and Balbriggan, together with a turnback facility at Balbriggan, would enable DART services to be extended northwards to Balbriggan. This is an integral project of the overall DART Underground programme.

In relation to the Maynooth Line Electrification and Resignalling project, this is a scheme which is also associated with the DART Underground programme. It would see the electrification of the Maynooth line from Connolly to Maynooth. Taken together, these improvements would allow through running of DART trains from Maynooth to Greystones on the South-Eastern Line, which is a fundamental feature of the revised DART service following the completion of DART Underground.

2.3.5 Integration and Sustainable Transport Investment

This investment sub-programme spans the provision of walking, bus and cycling infrastructure to safety improvements and sophisticated traffic control systems. It also includes supporting initiatives for public transport customers such as travel information provision. The main objective is to encourage the continuation of modal shift to cycling, walking and public transport. Within that overall objective, key priorities include:

Cycling/Walking:

- Development of regional cycle network, including both commuting and recreational routes;
- Provision of cycle parking facilities, including at public transport interchange points;
- Expansion of bike sharing schemes;
- Pedestrianisation and pedestrian improvement schemes; and

- Pedestrian / cycle / tourist signage.

Traffic Management:

- Traffic management schemes;
- Development of bus/cycling/walking transport corridors;
- Traffic re-routing projects in urban areas, to enhance facilities for shoppers, pedestrians and cyclists; and
- Traffic control and information schemes, including public transport prioritisation systems; and
- Development of parking facilities.

Safety;

- Removal of accident black spots;
- Provision of pedestrian crossings; and
- Junction safety improvement schemes.

Integration Projects:

- Real Time Passenger Information ;
- Integrated Ticketing ;
- Integrated Journey Planner; and
- Other transport Information systems.

2.3.6 An Integrated Service Plan

This particular element of the plan will only lead to significant impacts on the environment in combination with the infrastructural elements outlined above and, as such, its assessment is implicit in the assessment of the plan in its entirety.

2.3.7 Integration and Accessibility

The Authority will seek the following improvements in terms of integration and accessibility:

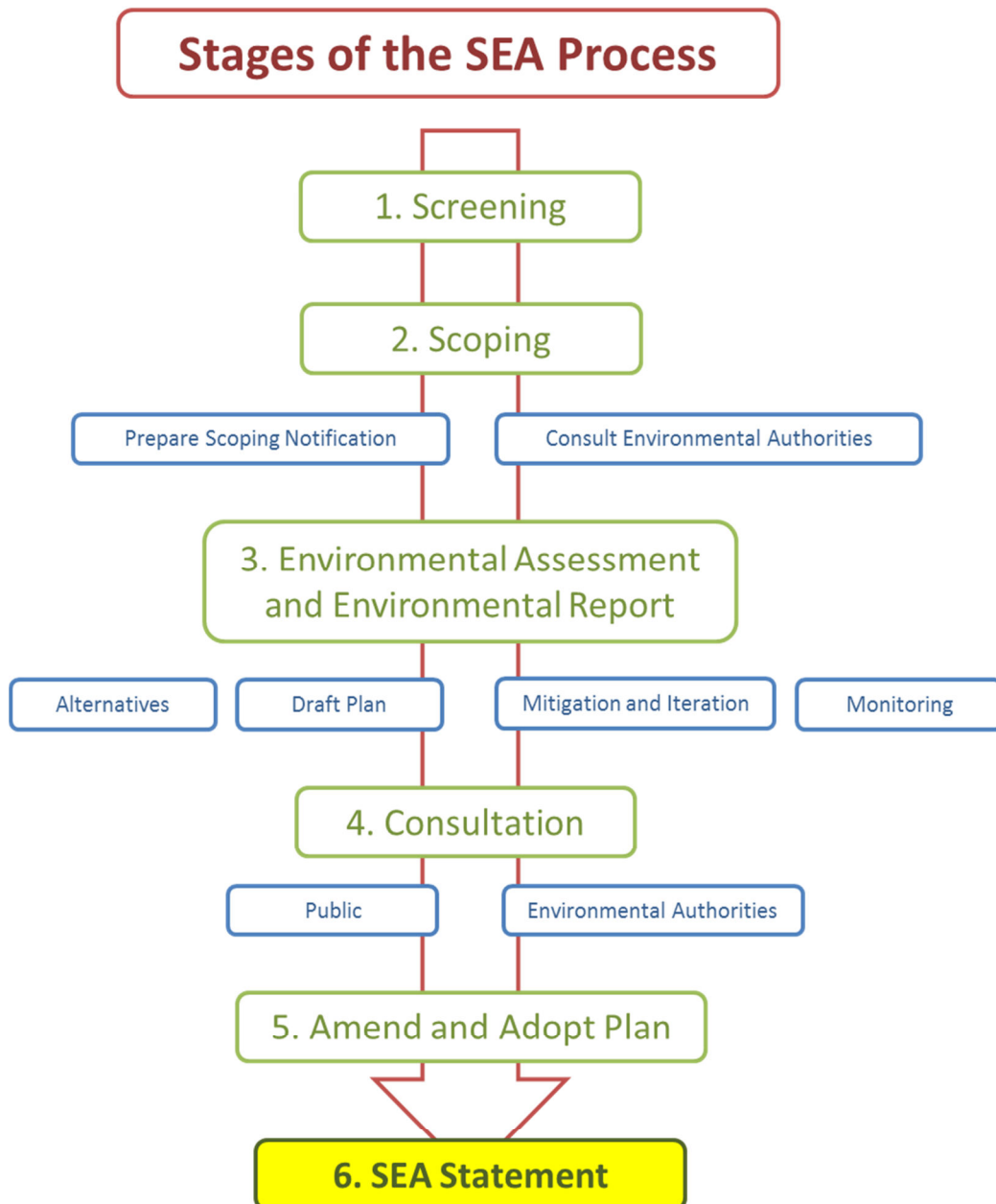
- Expansion of Leap card;
- Further Real Time Passenger Information roll-out;
- On-going Journey Planner development;
- Restructuring of Fares;
- Optimising Interchange; and
- Further development of the Public Transport Brand.

These particular elements of the plan will only lead to significant impacts on the environment in combination with the infrastructural elements outlined above and, as such, their assessment is implicit in the assessment of the plan in its entirety.

3. How Environmental Considerations have been Integrated into the Draft Plan

3.1 Stages in the SEA Process

The main stages in the SEA Process that was undertaken are shown below. This document represents the final stage in the chart.



3.2 Integration of the Plan and SEA

The SEA process for the Plan ensured the integration of environmental considerations as follows:

- Undertaking the SEA in parallel with the Plan;
- Undertaking the SEA in-house within the NTA with close regular contact between the Plan team and the SEA team;
- Issuing the Scoping Report to the Environmental Authorities for comments on key environmental issues and the proposed scope of the SEA at the earliest possible stage of the Plan preparation;
- Meeting with the Environmental Protection Agency to discuss the scope, alternatives and likely significant effects in advance of the Plan preparation;
- Carrying out a full assessment of the environmental effects of the Plan, and recommending and making changes to the Plan as a result.

The timeline for these steps is set out in the table below:

Action	Purpose	Output	Date
SEA Scoping Report published and sent to Environmental Authorities	To determine the appropriate scope and approach to be taken in the SEA.	SEA Scoping Notification	10 th October 2012
Meeting with Environmental Protection Agency	To discuss their response to the Scoping Notification and to further refine the approach and methodologies.		13 th March 2013
Publication of Draft Integrated Implementation Plan	Public Consultation on the NTA's proposals for transport in the Greater Dublin Area for the period 2013-2018	Draft Plan	7 th August 2013
Publication of Draft Environmental Report and Natura Impact Statement (NIS)	Public Consultation on the environmental effects of the Draft Integrated Implementation Plan.	Draft Environmental Report and NIS	7 th August 2013
Publication of Implementation Plan, Final Environmental Report, Final NIS and SEA Statement	The adoption of the Plan by Government, assessment of plan amendments, finalisation of reports and the setting out of how the SEA process has influenced the development of the Plan.	Final Plan, Environmental Report, NIS and SEA Statement	

The following section describes how the Draft Integrated Implementation Plan was amended based on the information provided in the Environmental Report .

3.2.1 SEA Input into Draft Plan

The SEA was commenced as the *nature* of the Implementation Plan was being defined and finalised in late 2012. Following the advice of the environmental authorities, the SEA focussed on those elements of the plan with the most significant likely environmental impacts, i.e. those contained

within the Capital Investment Programme and Integration of Land-Use and Transport chapters. Alternative land use policies or principles were not examined as these are fixed statutorily by the local authorities.

As no significant adverse impacts were identified through the SEA process at draft plan stage, it was not necessary to derive a comprehensive set of mitigation measures for each piece of infrastructure proposed, for example. As a high-level regional plan with little land-take and other negative environmental impacts anticipated, it was the view of the Authority that a policy statement insert into the plan which covered all proposals would suffice.

At the project-level Environmental Impact Assessment and Habitat Directive Assessment stage, detailed mitigation measures for all projects will be developed. The Luas Cross City project, for example, identifies a suite of measures aimed at reducing the adverse impacts of that scheme on environmental topics such as Archaeology and Cultural Heritage, Architectural Heritage and Landscape & Visual. It was assumed that similar sets of measures will be identified when any BRT lines are progressed to planning application stage, any new stations proposed are built, or any rail network development schemes progressed.

The Authority was therefore satisfied that the SEA and Draft Environmental Report highlighted any potential adverse impacts that may arise in the delivery of the Integrated Implementation Plan at the regional level, and that it is appropriate to mitigate in this manner. As such, the following policy statement was inserted into the Draft Integrated Implementation Plan as a means of ensuring that environmental impacts arising from the progress of the plan into the future were fully and comprehensively considered, minimised and mitigated to the greatest extent possible:

“The development of the Implementation Plan has been accompanied by consideration of environmental issues through, in particular, the Strategic Environmental Assessment process and the Habitats Directive Assessment process. That process of environmental assessment will continue through the project development stage for individual schemes forming part of the plan.

In delivering the plan, the Authority will, in collaboration with the relevant agencies, actively address the protection and enhancement, where practical, of the natural, built and historic environment associated with these schemes. Projects which are taken forward to development consent stage will be supported by environmental appraisal, Habitats Directive Assessment and Environmental Impact Assessment (EIA) where appropriate. All transport projects will be constructed in accordance with applicable design standards and environmental regulations and mitigation measures in accordance with good practice will be incorporated into the design and construction of these schemes.”

4. Consultation

4.1 Summary of Submissions Received and NTA Responses

Submissions on the Draft Plan, Environmental Report and Natura Impact Statement were received from the following:

- Environmental Protection Agency;
- National Parks and Wildlife Service; and
- Department of Communications, Energy and Natural Resources.

The main points from each of these submissions are summarised below as is the response of the NTA:

4.1.2 Environmental Protection Agency

Comments on the Plan

“The Plan should consider summarising /tabulating how the key issues identified are to be promoted in implementing the Plan. There would also be merits in including a more detailed description of how the SEA and AA have influenced the Plan.”

NTA Response: The Authority considered that the insertion into the plan document of a large number of environmental issues and SEA material would compromise the clarity of the plan, particularly when all of this material is readily available in the Environmental Report and associated documents.

“Consideration should also be given to including a recommendation/commitment promoting that environmental management plans be required as appropriate, for the relevant infrastructural improvements proposed in the Plan. A commitment to take into account issues such as waste management, remediation of potential contaminated lands, invasive species management and control, protection of designated and undesignated biodiversity sites, flood risk management, potential for visual impact on areas of significant landscape value etc. should also be considered for inclusion in the Plan.”

NTA Response: In line with the response to the previous point, it was considered unnecessary to include such details within the plan document itself, particularly as all of the above issues are dealt with via other legislative provisions and planning guidelines.

“The Plan should describe measures to mitigate for any potential significant environmental effects which may arise.”

NTA Response: Plan was updated to reflect this comment. See section 5.2 of this SEA Statement.

“In addition, consideration should be given to ensuring that the various ongoing CFRAMS studies within the Plan area, are taken into account in determining the potential impact on any transport related infrastructure which may be proposed in the lifetime of the Plan, and ensure that development is appropriate to the risk of flooding identified.”

NTA Response: Issue of flooding inserted into section 5.3 of the plan. See section 5.2 of this SEA Statement.

Comments on the Environmental Report

“Consideration should be given to incorporating the issues/challenges and suggested recommendations in Chapter 7 – Baseline of the SEA, within the Plan, to show how the Plan proposes to deal with or support the appropriate mitigation by the relevant Authority. The Plan should also promote that any projects arising out of implementation of the Plan, will be subject to the requirements of the EIA, Habitats, Water Framework and Floods Directives in particular, as relevant and appropriate.”

NTA Response: This was taken into account in the finalisation of the Environmental Report and in the rewording of section 5.3 of the plan.

“Consideration should be given to clarifying how the full range of environmental effects of the implementation of the Plan, as set out in the SEA Directive and Regulations, i.e. “secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative effects” have been assessed and documented.

In particular, the potential for cumulative effects in combination with other relevant Plans/ Programmes and Projects should be taken into account.”

NTA Response: While the Authority felt that this had been done to a satisfactory level in the Draft ER, the assessment was reviewed and strengthened where appropriate.

“Mitigation measures proposed should be directly linked to the specific relevant significant effects identified in the Environmental Report. There would be merits in providing a summary table, such as Table 9.1 – SEA results for Integrated Implementation Plan in Chapter 9 – Environmental Assessment of Integrated Implementation Plan also.

This table should also consider how each significant effect is linked directly to relevant mitigation measure(s), monitoring measure(s) and, where appropriate a specific Policy or Objective in the Plan. Where particular measures are addressed by other specific Plans / Programmes, the areas within the remit of the Planning authority should be described.”

NTA Response: While this was considered, it was deemed unnecessary for a plan which was assessed as having minor environmental effects. The policy statement in the plan, as amended post-consultation (Section 5.2 of this statement) covers this issue.

“Consideration should be given to the following:

- The inclusion of monitoring frequencies:
- Inclusion of the on-going review of environmental targets and indicators in the monitoring programme. Responsibility for this role should be clearly defined.”

NTA Response: Monitoring frequencies were included in the Draft ER. The Authority will monitor all indicators in line with updated environmental targets, as appropriate.

“The Monitoring Programme should be flexible to take account of specific environmental issues as they arise. The programme must be able to deal with the possibility of cumulative effects.”

NTA Response: The Authority is satisfied that the monitoring of the effects of the Implementation Plan, as set out, will take account of cumulative effects and will be flexible enough to take into account issues as they arise. The Authority will monitor all regional transport proposals on an ongoing basis.

“While Table 11.1 Implementation Plan Monitoring Programme is noted, consideration should be given to the following:

- Amend SEA Monitoring Indicator for SEA Objective 9 (Environmental Noise Directive) to include “number of transport (and associated infrastructural projects) related noise complaints”
- Amend SEA Monitoring Indicator for SEA Objective 13 and 14 (impacts to surface water systems and groundwater systems respectively) to include “change in surface water quality status classification”
- Amend SEA Monitoring Indicator for SEA Objective 18 (air quality) to include “changes to air quality from transport related sources”

NTA Response: Table 11.1 amended to reflect submission

4.1.3 National Parks and Wildlife Service

Comments on the Plan

“It is recommended that the final version of the Plan should highlight any changes made to the Plan as a result of the findings of the SEA Environmental Report and NIS.”

NTA Response: The plan has been amended as per the SEA and NIS, and as per public consultation. The details of the specific changes are set out in this SEA Statement.

“It is requested that the NTA consult with the National Parks and Wildlife Service (NPWS) of this Department at an early stage prior to carrying out any planning and design process for the electrification of the northern rail line including any proposed mitigation measures to offset any negative impacts on the Natura 2000 sites.”

NTA Response: The Authority will consult with NPWS at the earliest possible stage should any design and planning work commence in the lifetime of the plan.

“It is requested that the Department is consulted about any cycle network at an early stage and you are referred to section 7.7 of the Greater Dublin Regional Planning Guidelines 2012-2022 which deals with the issue of walking and cycling provisions in the countryside and the need for consultation and suitable protection of sensitive landscape areas and consultation with NPWS and other stakeholders.”

NTA Response: At the time of writing, the period of public consultation for the Draft GDA Cycle Network had ended, and the plan was nearing completion. NPWS were consulted in advance of the making of the draft plan, and as part of the statutory public consultation period. A number of significant issues have emerged, as predicted, and the Authority is satisfied that the final amended versions of the Integrated Implementation Plan and accompanying Natura Impact Statement have now dealt with these to the appropriate level of detail. See Section 5.4 of this SEA Statement.

Comments on the Environmental Report

“Species protected under the Wildlife Acts 1976-2010 and sites that should be considered for the purpose of article 10 of the Habitats Directive have not been adequately highlighted.”

NTA Response: Section 7.2.11 and Appendix A have been amended to address this comment.

“The section of Table 9.1 dealing with the biodiversity, flora and fauna SEA Objectives refers to the NIS when dealing with the issue of the electrification of the rail line north of Malahide. The Department is of the view that it is not clear enough from the NIS that it can be assumed that significant adverse effects can be avoided with mitigation. This issue is discussed in more detail below under the heading AA screening and NIS. It is recommended that the SEA should be amended to stress that in deciding on a solution it will be necessary to comply fully with Article 6. 3 (and, if warranted, Article 6.4, including compensatory measures) of the Habitats Directive.”

NTA Response: The Authority accepts this comment and have amended the conclusions of the NIS and SEA to reflect the uncertainty which would have been appropriate to express at the outset. The main thrust of the amendment is to demonstrate that while it may be likely that significant effects can be avoided, it is not reasonable to assume this is the case, and that the absence of suitable mitigation measures is still a possible outcome. While the requirement for Appropriate Assessment at project stage was stated in the NIS which accompanied the Draft Plan, the wording has been strengthened significantly as per section 5.4 of this SEA Statement.

“The issue of the cycle network has not been addressed in table 9.1. It has been mentioned in table 8.1 dealing with alternative strategies but has not addressed the issue in any great detail. It is recommended that this issue is addressed in more detail in the SEA. It would have been expected that the SEA process would help identify the biodiversity, flora and fauna issues that would arise at the route selection stage for a cycle network so that a more informed route selection could be made at that stage.”

NTA Response: At the time of writing, the period of public consultation for the Draft GDA Cycle Network had ended, and the plan was nearing completion. NPWS were consulted in advance of the making of the draft plan, and as part of the statutory public consultation period. A number of significant issues have emerged, as predicted, and the Authority is satisfied that the final amended versions of the Integrated Implementation Plan and accompanying Natura Impact Statement have now dealt with these to the appropriate level of detail. See Section 5.4 of this SEA Statement.

“The NTA should note that table 11.1 has quoted the wrong Department as being responsible for the National Biodiversity Plan. It should be the Department of Arts, Heritage and the Gaeltacht.”

NTA Response: Amended as requested.

“Consideration should be given to including in Appendix A the Wildlife Acts 1976-2010, the Flora Protection Order (SI 94 of 1999) and the European Communities (Birds and Natural Habitats) Regulations 2011. While the SEA Objectives do not actually refer to the legislation, they do refer to habitats and species protected under this legislation.”

NTA Response: Section 7.2.11 and Appendix A have been amended to address this comment.

Comments on the Appropriate Assessment

“It would have been expected that the AA process would help identify the issues that would arise at the Plan or route selection stage for a cycle network so that a more informed Plan or route selection could be made at that stage and that negative impacts on Natura 2000 sites could be avoided. It is recommended that the AA screening and NIS are amended to include this issue. There are also the issues of cumulative impact to be considered and care should be taken to ensure assessment and project development does not take place in such a way that could be considered to be project splitting.”

NTA Response: At the time of writing, the period of public consultation for the Draft GDA Cycle Network had ended, and the plan was nearing completion. NPWS were consulted in advance of the making of the draft plan, and as part of the statutory public consultation period. A number of significant issues have emerged, as predicted, and the Authority is satisfied that the final amended versions of the Integrated Implementation Plan and accompanying Natura Impact Statement have now dealt with these to the appropriate level of detail. See Section 5.4 of this SEA Statement.

“The Department is not convinced that the NIS has shown clearly enough that this collision risk (between birds and overhead cables) can be mitigated or that the removal of disturbance factors mentioned would offset it. In addition there is mention of a future walkway and cycleway at these locations (Malahide and Rogerstown Estuaries). These could have a cumulative impact which would need to be assessed. There could also be a cumulative impact on other SPAs from the proposed development where birds may fly between estuaries. If the Fingal County Development Plan is consulted it will be seen that there are also other issues to be considered for cumulative effects such as a possible marina development in Rogerstown Estuary. It is also possible that in the future the railway may be double tracked as per the Greater Dublin Area Draft Transport Strategy 2011-2030 yet this has not been mentioned. It is not clear how the now proposed electrification and amenity walkway/cycleway will interact with the strategy to double track the lines over Malahide and Rogerstown Estuaries.”

NTA Response: Significant changes have been made to both the Appropriate Assessment Screening Report and the NIS on foot of these comments. In particular, the potential for In-Combination Impacts has now been brought forward to Stage 2. See section 5.4 of this SEA Statement.

“It is advised that where a policy or issue such as the above is being addressed in the Plan that is likely to have a significant effect on a European site, as a minimum this should be clearly noted and the proposal should:

- be a statement of the problem that needs to be addressed (i.e. electrification of rail link from Malahide to Balbriggan)
- state that issues may arise under Article 6.3 of the Habitats Directive that will require assessment and that alternative solutions may need to be considered to avoid such an impact;
- stress that in deciding on a solution, it will be necessary to comply fully with Article 6.3 (and, if warranted, Article 6.4, including compensatory measures) of the Habitats Directive.”

NTA Response: The conclusions of the NIS were amended to more closely align with this approach.

4.1.4 Department of Communications, Energy and Natural Resources

“There is a significant absence of reference to the fisheries resource (freshwater fish species and habitats) throughout the reports. It is important to note that regard should be had to the need for the sustainable development of the inland and marine fisheries resource (including the conservation of fish and other species of fauna and flora, aquatic habitats and the biodiversity of inland and marine water ecosystems) when developing the project further toward individual project EIA or AA.”

NTA Response: This concern is noted and accepted. A new section, 7.2.10, has been inserted into the Environmental Report as well as additional text in Appendix A.

5. Post-Consultation Updates

5.1 Introduction

The Authority, in line with the SEA Directive and Habitats Directive, consulted at the earliest possible stage with the environmental authorities. As a result of this, the plan-making process and the associated SEA and AA were carried out together in a relatively straight-forward manner.

The primary outcome of the exercise was that the plan, with the exception of the electrification of the Northern Rail Line, was found to have no significant adverse impacts on the environment of the region. Certain localised potentially significant impacts were, however, identified, e.g., at Santry Demesne as a result of the BRT proposal. Another key outcome related to the positive impact that the plan could potentially have on the environment of the GDA, primarily through the anticipated reduction in the share of travel being undertaken by the private car.

Notwithstanding the above, there were a number of recommendations received from, in particular, the statutory environmental authorities, as set out in the previous section, to strengthen the environmental aspects of the plan and to reinforce the mitigation measures inserted into the plan. These have all been carefully considered by the Authority and changes to the Plan, the Environmental Report, the Appropriate Assessment Screening Report and Natura Impact Statement have all been made on foot of these suggestions. These changes are set out below.

5.2 Changes to the Plan as a Result of Consultation

Changes to Section 5.3 of the Plan

Original

The development of the Plan has been accompanied by consideration of environmental issues through, in particular, the Strategic Environmental Assessment process and the Habitats Directive Assessment process. That process of environmental assessment will continue through the project development stage for individual schemes forming part of the Plan.

In delivering the Plan, the Authority will, in collaboration with the relevant agencies, actively address the protection and enhancement, where practical, of the natural, built and historic environment associated with these schemes. Projects which are taken forward to development consent stage will be supported by environmental appraisal, Habitats Directive Assessment and Environmental Impact Assessment (EIA) where appropriate. All transport projects will be constructed in accordance with applicable design standards and environmental regulations and mitigation measures in accordance with good practice will be incorporated into the design and construction of these schemes.

Revision

The development of the Plan has been accompanied by consideration of environmental issues through, in particular, the Strategic Environmental Assessment process and the Habitats Directive Assessment process. These processes have fed back into the making of the Plan, in particular in relation to those locations where impacts have been identified as a result of the proposed development of transport infrastructure. Details of the environmental analysis and mitigation measures identified are presented in the accompanying Environmental Report and Natura Impact Statement.

The assessments identified a number of schemes which may have potential negative impacts on the environment. These mainly relate to the BRT and Cycle networks and the electrification of the Northern Rail line. Potential impacts identified include land-take, habitat loss and disturbance. The risk of flooding as a result of new infrastructure is also a key consideration and ongoing studies in this regard will be taken into account as the Plan is implemented. Mitigation measures such as choosing alignments of least impact, minimising land-take, best practice construction methods and timing, replacement of lost habitats etc. will all be examined as projects progress.

Notwithstanding the above, it must also be borne in mind that the Plan is likely to have significant positive impacts on the environment as a result of the anticipated mode shift away from the private car to public transport, walking and cycling. Positive impacts identified include reduction in greenhouse gas emissions, improved air quality and health, and enhancements to the public realm. As such, a view of the Plan which takes both positive and negative impacts of the proposed schemes and policies into account in a balanced manner is appropriate.

In general, the process of environmental assessment will continue through the project development stage for individual schemes forming part of the Plan. In delivering the Plan, the Authority will, in collaboration with the relevant agencies, actively address the protection and enhancement, where practicable, of the natural, built and historic environment associated with these schemes. Projects which are taken forward to development consent stage will be supported by environmental appraisal, Habitats Directive Assessment and Environmental Impact Assessment (EIA) where appropriate. All transport projects will be constructed in accordance with applicable design standards and environmental regulations and mitigation measures in accordance with good practice will be incorporated into the design and construction of these schemes.

Insert into Section 8.10 of the Plan

The Appropriate Assessment of the Plan identified the possibility of potential significant effects on the conservation objectives of Malahide and Rogerstown Estuaries due to the electrification of the rail line north of Malahide. The potential for in-combination effects have also been identified related to Fingal County Development Plan's identification of a cycle and walking route across the estuaries and a proposed marina at Rogerstown in addition to other rail proposals.

When the impact of the above proposals are viewed in their totality as a number of schemes, the application of the precautionary principle necessitates that their potential impacts are highlighted at this stage. While there is currently insufficient project design detail available to assess potential impacts with certainty, the likely impacts and potential mitigation measures are highlighted in the accompanying Natura Impact Statement and an approach to its progress set out.

5.3 Changes to the Environmental Report as a Result of Consultation

Insert into section 4.2 – SEA Scoping

The walking and cycling sub-programme should be noted at this point. This programme will be given expression primarily via the GDA Cycle Network Plan, which was on public display at the time of writing. The proposed Cycle Network Plan consists of an "Urban Network", an "Inter-urban Network" and a "Green Route Network". The latter will comprise the focus of the environmental assessment.

These Greenway routes make up a combination of existing and proposed routes that are largely off road providing amenities as well as routes to be used for commuting and other purposes. Greenways are generally located in scenic areas, along coastal paths or riverine environments and due to the nature and location of these sites are most likely to have significant environmental effects.

Many of the proposed greenways are made up of existing amenity areas but will require upgrading, ranging from minor works to the provision of new pedestrian and cycle facilities. Other Greenways may be new routes and will provide an amenity that did not exist prior to the cycleway. There is potential for greenways to have environmental impacts through construction of new pathways or by providing a new or improved access to sites or habitats that may be sensitive to disturbance and visitor pressures.

The details of the proposed network are fully dealt with in the Strategic Environmental Assessment and Appropriate Assessment of the GDA Cycle Network Plan, which is ongoing at the time of writing. While it would be inappropriate to address the environmental impacts of the Cycle Network Plan in detail in this Environmental Report, the potential impacts in-combination with this Plan are highlighted where appropriate.

New section 7.2.10

Inland Fisheries Ireland policy is aimed at maintaining a sustainable fisheries resource through preserving the productive capacity of fish habitat by avoiding habitat loss or mitigating harmful alterations to habitats. The prevailing guidelines “Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites” set out design principles and options for developments which include crossings of watercourses.

New section 7.2.11

Some County Councils have prepared Biodiversity Action Plans (BAPs). BAPs outline a set of actions and policy objectives which will raise awareness of biodiversity and also promote data gathering, protection and enhancement of biodiversity, including those species protected under the Wildlife Acts 1976-2010. Baseline information on protected species and designated sites is also typically presented. BAPs have been adopted by Dublin City Council and Dún Laoghaire Rathdown County Council, while Fingal, Wicklow and Meath County Council have prepared drafts.

The EPA has also published a Biodiversity Action Plan and this provides more strategic policy objectives to enhance biodiversity and increase biodiversity data availability.

Change to Table 9.1 under Objective 1

Original

The proposed electrification of the Northern Rail line, which involves the construction of overhead electric cables and supporting gantries across Swords/Broadmeadow and Rogerstown estuaries has been identified as having potentially significant direct impacts on the conservation objectives of these two Special Protection Areas in terms of the movement of birds. As such, a stage 2 Appropriate Assessment was carried out and mitigation measures have been proposed. Details of this are to be found in the accompanying Natura Impact Statement. This exercise concluded that the Northern railway line should be included within the plan as, with the application of mitigation, it is reasonable to assume significant adverse effects on site integrity can be avoided. The final plan will incorporate

a clear commitment in this regard and the precise details of the design of the electrification project and accompanying mitigation measures will be determined at the project-level Appropriate Assessment.

The Authority does not foresee any indirect impacts arising out of the Integrated Implementation Plan which are of significance. In some areas, such as Swords/Broadmeadow and Rogerstown Estuaries, Rye Water Valley/Cartron and South Dublin Bay, increased numbers of train services may lead to more trains passing through some Natura 2000 sites on existing rail lines. This would comprise the increased use of existing built infrastructure and may have an impact on the conservation objectives of those sites due to very minor increases in disturbance and some increased pollution from the passing of additional Diesel Multiple Units (DMUs). The Authority regards such impacts as insignificant and is therefore satisfied that the Integrated Implementation Plan will have no significant indirect impacts on the Natura 2000 network.

One location emerges where possible In-Combination impacts may arise as a result of the plan, namely at Baldoyle Bay SAC and SPA. This impact could potentially arise as a result of the construction of a Bus Rapid Transit to the new development area around Clongriffin and the associated development of this suburb. The protection of these two designated sites is a matter for the local authority and the Draft Local Area Plan for this area contains a number of objectives which clearly set out policy in this regard. The Authority is therefore satisfied that no significant In-Combination effects will arise as a result of the Implementation Plan.

A preliminary 0 score is therefore given, but it must be borne in mind that the level of detail which is available at present is not sufficient to make a definitive determination across all elements of the plan. The Authority, in conjunction with other agencies and the local authorities, will not pursue any schemes arising out of this plan, or in-combination with other plans, which will adversely affect the integrity of a Natura 2000 site, unless there are no alternative solutions and that it has been demonstrated that the project is of overriding public interest. Further information is contained in the accompanying Appropriate Assessment Screening Report and Natura Impact Statement.

Revision

There is potential for likely significant effects arising from electrification of the Northern rail line and it is possible these could lead to effects on site integrity. In the absence of detailed information about how birds use the estuary, particularly in relation to flight paths, feeding and foraging areas there is uncertainty over whether such effects would be significant. Detailed survey work to inform an AA would be required once a fully worked up project design was developed. Mitigation, including looking at alternative methods of electrification, is available and evidence indicates that these can be effective in reducing impacts to below significant levels.

As a consequence, the proposal for electrification of the Northern railway line should be included within the strategic plan as, with the application of mitigation, it is likely that significant adverse effects on site integrity can be avoided.

At the EIA and planning application stage a further Appropriate Assessment will be required based on site specific survey information and consultation, and incorporating the mitigation measures provided in the accompanying NIS.

The potential for in-combination effects have also been identified related to Fingal County Development Plan's and the NTA Draft Cycle Network Plan's identification of a cycle and walking

route across or close to the estuaries, a Fingal proposal for a marina at Rogerstown, in addition to other rail proposals.

When the impact of the above proposals are viewed in their totality as a number of schemes, the application of the precautionary principle necessitates that their potential impacts are highlighted at this stage. While there is currently insufficient project design detail available to assess potential impacts with certainty, the likely impacts and mitigation measures have been referenced here and an approach to their progress set out, in accordance with the content of the relevant plans.

In relation to the electrification of the northern rail line itself, it is currently unknown whether or not impacts on these sites may be of significance in terms of their conservation objectives. This will be determined through project level Appropriate Assessment at a time when design proposals become available. While the NIS concludes that measures to satisfactorily mitigate any potential negative impacts of the electrification are likely to be found, there remains a possibility that mitigation may not be possible.

If at project-level Appropriate Assessment it is deemed that there may be significant impacts on the integrity of any of these sites that cannot be mitigated, then in order for the project to proceed, alternative solutions must be examined. In the absence of such alternatives, Imperative Reasons of Over-riding Public Interest (IROPI) will need to be demonstrated and suitable compensatory measures, probably in the form of the provision of compensatory habitat, will need to be devised, in line with Articles 6.3 and 6.4 of the Habitats Directive. This will all be carried out in close consultation with National Parks and Wildlife Services and Irish Rail, as the ultimate implementing agency and owner of the railway.

The Authority does not foresee any indirect impacts arising out of the Integrated Implementation Plan which are of significance. In some areas, such as Swords/Broadmeadow and Rogerstown Estuaries, Rye Water Valley/Carnton and South Dublin Bay, increased numbers of train services may lead to more trains passing through some Natura 2000 sites on existing rail lines. This would comprise the increased use of existing built infrastructure and may have an impact on the conservation objectives of those sites due to very minor increases in disturbance and some increased pollution from the passing of additional Diesel Multiple Units (DMUs). The Authority regards such impacts as insignificant and is therefore satisfied that the Integrated Implementation Plan will have no significant indirect impacts on the Natura 2000 network.

A preliminary 0 score is therefore given, but it must be borne in mind that the level of detail which is available at present is not sufficient to make a definitive determination across all elements of the plan. The Authority, in conjunction with other agencies and the local authorities, will not pursue any schemes arising out of this plan, or in-combination with other plans, which will adversely affect the integrity of a Natura 2000 site, unless there are no alternative solutions and that it has been demonstrated that the project is of overriding public interest. Further information is contained in the accompanying Appropriate Assessment Screening Report and Natura Impact Statement.

Changes to Chapter 10 – Mitigation

This chapter was amended to reflect the changes made to section 5.3 of the plan, which comprised the overarching statement in relation to the environment, and the insert into section 8.10 related to the northern rail line.

5.4 Changes to the Appropriate Assessment Screening Report and Natura Impact Statement

Screening Report

Insert into Section 4

In other cases, particularly the cycling and walking programme, the detail of the infrastructure proposed is not yet known. This programme is developed on a year-by-year basis depending on operational, administrative and financial factors, but will be based on the emerging GDA Cycle Network Plan. The Integrated Implementation Plan itself does not identify particular schemes in this regard, merely the fact that a programme will be implemented and that a particular budget is available over the period of this plan. The environmental impact and the Appropriate Assessment of these schemes will be undertaken as part of County and City Development Plans, Local Area Plans and the National Transport Authority's Greater Dublin Area Cycle Network Plan. Each project will also be subject to project-level Appropriate Assessment and environmental assessment either as part of a planning application or a Part 8 application.

In keeping with best practice, however, the likely potential impacts of the cycling programme should be noted within the scope of this plan. The proposed cycle network plan consists of an "Urban Network", an "Inter-urban Network" and a "Green Route Network". The latter will comprise the focus of the Appropriate Assessment for the Cycle Network Plan.

These Greenway routes make up a combination of existing and proposed routes that are largely off road providing amenities as well as routes to be used for commuting and other purposes. Greenways are generally located in scenic areas, along coastal paths or riverine environments and due to the nature and location of these sites are most likely to come in contact with sites of conservation interest, often within or adjoining Natura 2000 Sites.

Many of the proposed greenways are made up of existing amenity areas but will require upgrading, ranging from minor works to the provision of new pedestrian and cycle facilities. Other Greenways may be new routes and will provide an amenity that did not exist prior to the cycleway. There is potential for greenways to have direct impacts on Natura 2000 sites though construction of pathways within or in proximity to the site or indirectly by providing a new or improved access to sites that are sometimes highly sensitive to disturbance and visitor pressures. The details of the proposed network are fully dealt with in the Appropriate Assessment of the GDA Cycle Network Plan, which is ongoing at the time of writing, however any potential effects of the Implementation Plan in-combination with the GDA Cycle Network have been examined here.

Amendments and Inserts in Section 4.3

On examination of the proposed infrastructure, the designated sites, as well as the policies of the local authorities, three locations emerge where possible In-Combination impacts may arise as a result of the plan, at the following locations:

- Baldoyle Bay SAC and SPA;
- Rogerstown Estuary SAC and SPA
- Malahide Estuary SAC and SPA.

In relation to Rogerstown and Malahide, potential in-combination effects have been identified as a result of the implementation of the Fingal Development plan which provides for a new marina at

Rogerstown and a cycleway/walkway across both estuaries, the GDA Cycle Network Plan which similarly may seek to provide for a greenway here and the Draft Transport Strategy's long-term goal of providing additional tracks at these locations. These potential in-combination impacts have been taken forward to Stage 2 Appropriate Assessment.

Natura Impact Statement

Insert into Section 2.3.4

As set out in the Appropriate Assessment Screening Report, the detail of the infrastructure proposed as part of the cycling and walking programme is not yet known. This programme is developed on a year-by-year basis depending on operational, administrative and financial factors, but will be based on the emerging GDA Cycle Network Plan. The Integrated Implementation Plan itself does not identify particular schemes in this regard, merely the fact that a programme will be implemented and that a particular budget is available over the period of this plan. The environmental impact and the Appropriate Assessment of these schemes will be undertaken as part of County and City Development Plans, Local Area Plans and the National Transport Authority's Greater Dublin Area Cycle Network Plan. Each project will also be subject to project-level Appropriate Assessment and environmental assessment either as part of a planning application or a Part 8 application.

New Section 5 – In-Combination Impacts

In relation to these same sites, and as set out in the Appropriate Assessment Screening Report, potential in-combination effects have been identified as a result of the implementation of the Fingal Development plan which provides for a new marina at Rogerstown and a cycleway/walkway across both estuaries; the emerging GDA Cycle Network Plan which similarly may seek to provide for a greenway here, and the Draft Transport Strategy's long-term goal of providing additional tracks at these locations.

The Fingal Development Plan incorporates the following relevant objectives:

- Objective BD12

Strictly protect areas designated or proposed to be designated as Natura 2000 sites (also known as European sites) including any areas that may be proposed for designation or designated during the period of this Plan. These include Special Areas of Conservation (SACs) designated pursuant to the Habitats Directive and Special Protection Areas (SPAs) designated pursuant to the Birds Directive, a number of which have also been designated under the Ramsar Convention.

- Objective BD13

Ensure Appropriate Assessment Screening and, where required, full Appropriate Assessment is carried out for any plan or project which, individually, or in combination with other plans and projects, is likely to have a significant direct or indirect impact on any Natura 2000 site or sites.

- Objective BD14

Ensure planning applications for proposed developments likely to have significant direct or indirect impacts on any Natura 2000 site or sites are accompanied by a Natura Impact

Statement prepared in accordance with the Guidance issued by the Department of the Environment, Heritage and Local Government (Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities, 2009).

In relation to the emerging GDA Cycle Network Plan, an indicative Greenway only has been included in the plan with the option to move to alternative routes if this is deemed necessary at lower tier plan or project level.

Appropriate Assessment of the NTA Draft Transport Strategy for the GDA identified the possibility that the construction of additional tracks on the Northern Line may result in significant negative impacts on the conservation objectives of these Natura 2000 sites; specifically, habitat loss and disturbance to fauna in Malahide Estuary and Rogerstown Estuary, where existing rail bridges are likely to require widening. Ideally, significant negative impacts will be avoided through design and mitigation, however, if this is not possible then alternatives will need to be examined and in the absence of these, there will be a requirement to demonstrate Imperative Reasons of Overriding Public Interest (IROPI) for the scheme and to implement compensatory measures to offset any significant negative impacts that are identified.

As can be seen from the above, significant adverse effects arising from the Implementation Plan in combination with the Fingal County Development Plan and/or the GDA Cycle Network plan are not anticipated, due to the presence of policies aimed at protecting the sites or policies aimed at avoiding impacts by way of alternatives. In relation to the long-term proposal to provide additional rail infrastructure at these locations, if significant adverse impacts are identified and no alternatives found, this project will only proceed on the basis of a demonstration of IROPI and the provision of compensation, in line with the Articles 6.3 and 6.4 of the Habitats Directive.

Amendment to Section 6 – Conclusion

As a consequence, the proposal for electrification of the Northern railway line should be included within the strategic plan as, with the application of mitigation, it is ~~reasonable to assume~~ **likely** that significant adverse effects on site integrity can be avoided.

Insert into Section 6 – Conclusions

The potential for in-combination effects have also been identified related to Fingal County Development Plan's and the NTA Draft Cycle Network Plan's identification of a cycle and walking route across or close to the estuaries, a Fingal proposal for a marina at Rogerstown in addition to other rail proposals.

When the impact of the above proposals are viewed in their totality as a number of schemes, the application of the precautionary principle necessitates that their potential impacts are highlighted at this stage. While there is currently insufficient project design detail available to assess potential impacts with certainty, the likely impacts and mitigation measures have been referenced here and an approach to their progress set out, in accordance with the content of the relevant plans.

In relation to the electrification of the northern rail line itself, it is currently unknown whether or not impacts on these sites may be of significance in terms of their conservation objectives. This will be determined through project level Appropriate Assessment at a time when design proposals become available. While the Appropriate Assessment concludes that measures to satisfactorily mitigate any potential negative impacts of the electrification are likely to be found, there remains a possibility that mitigation may not be possible.

If at project-level Appropriate Assessment it is deemed that there may be significant impacts on the integrity of any of these sites that cannot be mitigated, then in order for the project to proceed, alternative solutions must be examined. In the absence of such alternatives, Imperative Reasons of Over-riding Public Interest (IROPI) will need to be demonstrated and suitable compensatory measures, probably in the form of the provision of compensatory habitat, will need to be devised, in line with Articles 6.3 and 6.4 of the Habitats Directive. This will all be carried out in close consultation with National Parks and Wildlife Services and Irish Rail, as the ultimate implementing agency and owner of the railway.

5.5 Screening of Changes to the Plan

Apart from the changes outlined above, which relate solely to environmental considerations, there were two material amendments / additions to the Draft Implementation Plan arising from the public consultation process, as follows:

Insert into section 9.4

Public Cycle Parking

In recent years there has been a significant increase in cycling numbers in the region, particularly in Dublin City Centre, for a range of journey purposes. This has led to a clear shortage of bicycle parking spaces emerging at peak times at many locations throughout the region. The Authority will assess the need for more public bicycle parking in conjunction with local authorities and relevant stakeholders. This assessment will have, as its core objective, the provision of high quality cycle parking as close as possible to the main destinations in the relevant area, while continuing to facilitate pedestrian movements and accessibility for those with mobility impairments.

New section 11.8 – Safety and Personal Security

One of the primary objectives of this plan is to increase the use of public transport. In order to achieve this objective, trains, trams and buses in the Greater Dublin Area must be safe and must be perceived as safe at all times, in all locations. The Authority will liaise with transport operators, local authorities and An Garda Síochána in order to safeguard the welfare, safety and personal security of the travelling public, and invest in improved infrastructure where deemed necessary.

Neither of these additions were deemed to be significant in terms of environmental impact on a regional scale. They would be considered, however, as having the potential to enhance the performance of the plan against SEA Objectives in relation to Human Health, by promoting and facilitating cycling and by improving personal safety on public transport.

6. Consideration of Alternatives

6.1 Overview of the Alternative Packages

The SEA focussed on those elements of the plan with the most significant likely environmental impacts, i.e. those contained within the Capital Investment Programme and Integration of Land-Use and Transport chapters. Luas Cross City was included in all alternatives and is a fixed element of the plan in terms of commitment, priority and in terms of phasing. Other infrastructural projects are also fixed in terms of commitment but their priority and phasing is not and, as such, the alternatives were defined by placing varying degrees of priority on these other infrastructural projects.

Each alternative therefore included Luas Cross City and focussed on the differing levels of priority afforded to BRT and Heavy Rail elements of the Capital Investment Programme. The general basis of the alternatives assessment consists of a comparison between each of the three themed packages. An assessment rating of – 3 (major negative) to +3 (major positive) has been provided for the entire package against each of the individual SEA Objectives.

6.1.1 Do-Minimum

The Do-Minimum contains the following infrastructural elements:

- Luas Cross City – a light rail line from St. Stephen’s Green to Broadstone linking the Green Line to the Maynooth Commuter rail line via interchange with the Red Line at Abbey Street;
- The Sustainable Transport Measures Grants (STMG) Programme up to 2016 only;
- Completion of Phase 1 of City Centre Resignalling Programme; and
- Bus Stops Facilities Programme.

6.2.2 Prioritisation of Heavy Rail

The Heavy Rail Alternative prioritises the following infrastructural elements:

- Luas Cross City;
- The STMG Programme up to 2018;
- Bus Stops Facilities Programme;
- Opening of Heuston West, Kishoge and Pelletstown Stations;
- Completion of all phases of City Centre Resignalling Programme;
- Closure of all level crossings on the Maynooth Line;
- Electrification of the Northern and Maynooth Lines;
- Re-opening of the Phoenix Park Tunnel; and
- Station Upgrade and Improvement Programme.

6.2.3 Prioritisation of Bus Rapid Transit

The Bus Rapid Transit Alternative prioritises the following infrastructural elements:

- Luas Cross City;

- The STMG Programme up to 2018;
- Completion of Phase 1 of City Centre Resignalling Programme;
- Bus Stops Facilities Programme;
- BRT from Swords to the City Centre;
- BRT from Blanchardstown to UCD via City Centre; and
- BRT from Clongriffin to Tallaght via City Centre.

6.2.4 Summary of Alternatives

As referred to earlier, the main thrust of the alternatives assessment was to compare and contrast various fixed elements of the capital investment programme in order to determine the level of priority that should be given to each one in the emerging preferred Draft Implementation Plan. The core difference between them is therefore the focus of the expenditure of investment beyond the construction of the Cross City Luas. The Heavy Rail Alternative proposes significant enhancements to the rail network in the Dublin area in order to allow for a high level of service and to maximise the use of the existing asset. The BRT Alternative, while incorporating some elements of Heavy Rail investment, focusses instead on 5 radial BRT lines which converge in the City Centre.

6.2 Alternatives Assessment Results

Table 8.1 below presents the results for the alternatives assessment. The following key applies to the rating in Table 8.1 below.

+ 3	Major positive impacts
+ 2	Moderate Positive impacts
+ 1	Minor positive impacts
0	Neutral
- 1	Minor negative impacts
- 2	Moderate negative impacts
- 3	Major negative impacts

Assessment Against SEA Objectives and Assessment Scores			
SEA Objective	Do-Minimum	Heavy Rail	Bus Rapid Transit
Biodiversity			
1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs).	0	0	0
2. To support the strategic objectives of the National Biodiversity Plan (NBP).	0	0	0
3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	0	0	0
Landscape			
4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	+1	0	+1
5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	+1	+1	+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	+2	+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	+2	+2
Human Health			

Assessment Against SEA Objectives and Assessment Scores			
8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	+1	+2	+2
9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	+1	+1	+1
10. To minimise safety risks to human health arising from transport related activity.	+1	+1	+1
11. To support health improvements and benefits from transport-related activities.	+1	+1	+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	0	0
13. To minimise impacts to surfacewater systems and resources.	0	0	0
14. To minimise impacts to groundwater systems and resources.	0	0	0
15. To minimise impacts to coastal systems and resources.	0	0	0
16. To minimise impacts to transitional systems and resources.	0	0	0
17. To minimise the risk of flooding.	0	0	0
Air			
18. To reduce negative air quality impacts arising from transport-related emissions.	+1	+2	+2
19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	0	+1	0
Climatic Factors			
20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	+1	+2	+2
Soils & Geology			
21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	0	0	0
22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	0	-1	-1
23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	0	0	0
Material Assets			
24. To protect public assets and infrastructure.	+1	+1	+1
25. To reduce the fossil fuel demand by the transport sector.	+1	+2	+2
26. To assist with the reuse and regeneration of brownfield sites.	+1	+2	+2
Cultural Heritage			
27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	0	0	0

6.3 Summary of Alternatives Results

All three alternatives perform generally well against the SEA objectives. While there were no significant adverse impacts identified, there were several areas where a neutral impact is forecast, and other areas where positive impacts were identified. Overall the alternatives were assessed as positive generally.

In terms of those objectives related to land-take, the absence of negative scores is due to the fact that very little new infrastructure is being proposed and the associated land-take required is therefore minimal on a regional scale. The positive scores in these cases relate to the mode shift away from the private car anticipated as a result of each alternative and associated benefits, in the broadest sense, for flora and fauna in the GDA from enhanced air quality, for example.

In terms of the comparison of the three options, the do-minimum, while positive, does not emerge as a preferred approach as it has less positive impacts than the other two. The Heavy Rail and BRT alternatives both score very positively. There are two key SEA topics where the two alternatives differ – Air (19) and Landscape (4 and 5), with Rail being more positive on the former and BRT on the latter. Due to the fact that BRT's weakness in terms of the Air Framework Directive is highly precautionary, the differences between the two alternatives in this regard are negligible. Similarly, the positive impact on undesignated landscapes arising from BRT is one which a Heavy Rail alternative simply cannot really achieve and the negative impact identified in Heavy Rail is precautionary. As such it would be unfair to differentiate between the two on this basis.

6.4 Development of Preferred Draft Integrated Implementation Plan

As this assessment was concerned primarily with the prioritisation of certain elements of the plan in order to assess which projects and proposals should be implemented first, the Authority is satisfied that both Heavy Rail and Bus Rapid Transit alternatives should be implemented in tandem with each other and that the impetus of the plan can be based on both. As such, the SEA process in relation to the assessment of alternatives has not chosen one particular option and the decision related to which proposals to prioritise will not relate solely to environmental impacts.

7. Monitoring

7.1 Introduction

This chapter sets out the proposed monitoring programme to be implemented with the adoption of the Integrated Implementation Plan. The SEA Directive states that monitoring of the likely significant environmental effects of the implementation of plans and programmes must be undertaken in order to identify at an early stage unforeseen effects and be able to undertake appropriate remedial measures. This programme is based on that proposed for the monitoring of the Draft Transport Strategy for the Greater Dublin Area 2011-2030 and, in essence, replaces it. As such, in the event of a new long-term Transport Strategy being developed, it is likely that the same programme, incorporating relevant updates, will apply.

7.2 Proposed Monitoring Programme

The SEA monitoring programme for the plan is set-out below in Table 11.1. Monitoring has been proposed for all 27 SEA Objectives and not limited to topics for which more significant effects are predicted. This was undertaken with a view to better understanding the effects of the plan's implementation across all environmental topics.

The intention when developing the monitoring programme was to build upon the existing data collected by the NTA and the other agencies in the Greater Dublin Area. The role of the Regional Planning Guidelines for the GDA will be of specific relevance in this regard.

It is recommended that a bi-annual Monitoring Report is prepared to report on the progress of the SEA monitoring programme and that a summary of key actions required to address both predicted and also unforeseen significant environmental effects included.

If monitoring identifies a regular frequency of a negative significant environmental effect, then more frequent monitoring and reporting may be required to determine if remedial action is effective in addressing the negative effect.

The availability of data and the development of new or more detailed data sets are likely to be important issues and should be noted in all Monitoring Reports.

The suite of monitoring measures below should also be reviewed on an annual basis with new monitoring measures included should new and relevant data sets become available.

Table 11.1

Implementation Plan Monitoring Programme

SEA Objective	SEA Monitoring Indicator	Source	Authority
1. To avoid impacts on the integrity of European Conservation Sites (SACs and SPAs) and nationally designated sites (NHAs).	<ul style="list-style-type: none"> ▪ Area of direct impacts on Natura 2000 network affected by implementation of Implementation Plan. 	<ul style="list-style-type: none"> ▪ Project level HDA (where applicable for projects) ▪ NPWS Reporting ▪ County and City Development Plan Reporting (relevant to Natura 2000 Network) 	<ul style="list-style-type: none"> ▪ Irish Rail ▪ RPA ▪ NRA ▪ Local Authorities ▪ National Parks and Wildlife Service
2. To support the overall goal of the National Biodiversity Plan.	<ul style="list-style-type: none"> ▪ Key findings and reporting of the National Biodiversity Plan 	<ul style="list-style-type: none"> ▪ Updates and Reviews of National Biodiversity Plan 	<ul style="list-style-type: none"> ▪ Department of Arts, Heritage and the Gaeltacht
3. To minimise impacts on locally-important biodiversity in the Greater Dublin Area.	<ul style="list-style-type: none"> ▪ Impact on biodiversity from Implementation Plan transport schemes; ▪ Area of greenfield land zoned for development; ▪ Region-wide biodiversity impacts 	<ul style="list-style-type: none"> ▪ Project level EIA ▪ County and City Development Plan Reporting (relevant to biodiversity); ▪ Biodiversity Action Plan Reporting 	<ul style="list-style-type: none"> ▪ Irish Rail ▪ RPA ▪ NRA ▪ Local Authorities
4. To avoid or, where infeasible, minimise impacts on designated and protected landscapes and conservation areas.	<ul style="list-style-type: none"> ▪ Impact on designated landscapes (when/if developed) by Implementation Plan transport schemes ▪ Biodiversity Action Plan reporting ▪ Impacts on Protected Structures from Implementation Plan transport schemes 	<ul style="list-style-type: none"> ▪ Project level EIA ▪ County and City Development Plan Reporting (relevant to biodiversity); ▪ Biodiversity Action Plan Reporting 	<ul style="list-style-type: none"> ▪ Irish Rail ▪ RPA ▪ NRA ▪ Local Authorities
5. To minimise impacts on undesignated landscape resources (townscapes, seascapes, riverscapes, general landscapes).	<ul style="list-style-type: none"> ▪ Localised landscape impacts 	<ul style="list-style-type: none"> ▪ Project level EIA 	<ul style="list-style-type: none"> ▪ Irish Rail ▪ RPA ▪ NRA ▪ Local Authorities
6. To increase accessibility to economic and employment opportunities, in particular for those who are physically, economically or socially disadvantaged within the GDA.	<ul style="list-style-type: none"> ▪ Time taken to travel to work, including for disadvantaged ▪ Rates of Unemployment by ED in GDA ▪ Specific monitoring of accessibility (travel times, frequency of PT, alternative PT options etc.) 	<ul style="list-style-type: none"> ▪ Analysis of Censuses of Population ▪ Live Register ▪ Quarterly National Household Survey ▪ NTA specialist monitoring 	<ul style="list-style-type: none"> ▪ Central Statistics Office ▪ NTA
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.	<ul style="list-style-type: none"> ▪ Time taken to travel to schools, colleges, retail, cultural facilities and services, including for disadvantaged ▪ Specific monitoring of accessibility (travel times, frequency of PT, alternative PT options etc.) 	<ul style="list-style-type: none"> ▪ Analysis of Censuses of Population ▪ NTA Household Surveys ▪ NTA specialist monitoring 	<ul style="list-style-type: none"> ▪ Central Statistics Office ▪ NTA
8. To contribute to improvements to transport-related aspects of quality of life for residents, workers and visitors to the GDA.	<ul style="list-style-type: none"> ▪ Transport mode split ▪ Extent and Quality of bus corridors (Km) ▪ Extent of walking/cycling networks delivered (km) ▪ Mean Travel Times 	<ul style="list-style-type: none"> ▪ Analysis of Censuses of Population ▪ NTA Travel and Household Surveys ▪ Reporting requirements of PSO Contracts and Licences ▪ Bus Monitoring 	<ul style="list-style-type: none"> ▪ Central Statistics Office ▪ NTA ▪ RPA ▪ NRA

	<ul style="list-style-type: none"> ▪ Customer satisfaction surveys 	<ul style="list-style-type: none"> ▪ Dublin City Canal Cordon Counts 	<ul style="list-style-type: none"> ▪ Irish Rail ▪ Dublin Bus ▪ Bus Éireann ▪ Dublin City Council
9. To support the objectives of the Environmental Noise Directive in relation to transport-related noise.	<ul style="list-style-type: none"> ▪ Monitoring and reporting associated with the Noise Action Plan ▪ Number of transport projects-related noise complaints 	<ul style="list-style-type: none"> ▪ Noise Action Plan Monitoring and Implementation 	<ul style="list-style-type: none"> ▪ Local Authorities
10. To minimise safety risks to human health arising from transport related activity.	<ul style="list-style-type: none"> ▪ Number Injured and killed in the GDA in Road Accidents 	<ul style="list-style-type: none"> ▪ Annual Road Collision Handbook 	<ul style="list-style-type: none"> ▪ Road Safety Authority
11. To support health improvements and benefits from transport-related activities.	<ul style="list-style-type: none"> ▪ Mode split for cycling and walking ▪ Incidence or prevalence of heart disease or obesity ▪ Self-reported health statistics 	<ul style="list-style-type: none"> ▪ Health Atlas ▪ Analysis of Censuses of Population ▪ Dublin City Canal Cordon Counts ▪ NTA Household Survey 	<ul style="list-style-type: none"> ▪ Health Service Executive ▪ Dublin City Council ▪ Central Statistics Office
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).	<ul style="list-style-type: none"> ▪ Direct and indirect impacts on POMs ▪ Applicable monitoring data 	<ul style="list-style-type: none"> ▪ WFD monitoring programme reports 	<ul style="list-style-type: none"> ▪ Relevant River Basin Districts ▪ EPA
13. To minimise impacts to surfacewater systems and resources.	<ul style="list-style-type: none"> ▪ Extent of surfacewater bodies directly affected by implementation of Plan ▪ Change in surface water quality status classification 	<ul style="list-style-type: none"> ▪ Project level EIA ▪ Development Plans ▪ WFD monitoring programme reports 	<ul style="list-style-type: none"> ▪ Irish Rail ▪ RPA ▪ NRA ▪ Local Authorities ▪ EPA
14. To minimise impacts to groundwater systems and resources	<ul style="list-style-type: none"> ▪ Extent of groundwater bodies directly affected by implementation of Plan ▪ Change in groundwater quality status classification 	<ul style="list-style-type: none"> ▪ Project level EIA ▪ Development Plans (incl. SEA monitoring) ▪ WFD monitoring programme reports 	<ul style="list-style-type: none"> ▪ Irish Rail ▪ RPA ▪ NRA ▪ Local Authorities ▪ EPA
15. To minimise impacts to coastal systems and resources.	<ul style="list-style-type: none"> ▪ Extent of coastal systems directly affected by implementation of Plan 	<ul style="list-style-type: none"> ▪ Project level EIA ▪ Development Plans (incl. SEA monitoring) ▪ WFD monitoring programme reports 	<ul style="list-style-type: none"> ▪ Irish Rail ▪ RPA ▪ NRA ▪ Local Authorities ▪ EPA
16. To minimise impacts to	<ul style="list-style-type: none"> ▪ Extent of transitional systems directly affected by implementation of 	<ul style="list-style-type: none"> ▪ Project level EIA 	<ul style="list-style-type: none"> ▪ Irish Rail

transitional systems and resources.	Plan	<ul style="list-style-type: none"> ▪ Development Plans (incl. SEA monitoring) ▪ WFD monitoring programme reports 	<ul style="list-style-type: none"> ▪ RPA ▪ NRA ▪ Local Authorities ▪ EPA
17. To minimise the risk of flooding.	<ul style="list-style-type: none"> ▪ Flood risk ▪ Number, extent and location of flood events in the GDA 	<ul style="list-style-type: none"> ▪ Project level EIA ▪ Flood Mapping 	<ul style="list-style-type: none"> ▪ Irish Rail ▪ RPA ▪ NRA ▪ Local Authorities ▪ Office of Public Works
18. To reduce negative air quality impacts arising from transport-related emissions. and 19. To ensure compliance with the Air Framework Directive and associated daughter Directives (and the transposing Regulations in Ireland).	<ul style="list-style-type: none"> ▪ Air quality monitoring reports ▪ Changes to air quality from transport-related sources 	<ul style="list-style-type: none"> ▪ EPA Air Quality Reports ▪ Local Authority Annual Reports 	<ul style="list-style-type: none"> ▪ EPA ▪ Local Authorities
20. To contribute to the reduction of greenhouse gas emissions arising from transport-related activities.	<ul style="list-style-type: none"> ▪ Sectoral GHG emissions ▪ Atmospheric Carbon Dioxide Levels 	<ul style="list-style-type: none"> ▪ EPA Reporting (Indicators) 	<ul style="list-style-type: none"> ▪ EPA
21. To minimise negative impacts on important and vulnerable soils resources used for agricultural purposes.	<ul style="list-style-type: none"> ▪ Land cover changes in the GDA 	<ul style="list-style-type: none"> ▪ CORINE Land Cover data changes ▪ Development Plan data (incl. SEA monitoring) 	<ul style="list-style-type: none"> ▪ EPA ▪ Local planning authorities
22. To reduce consumption of construction material and generation of construction waste as part of transport infrastructure projects.	<ul style="list-style-type: none"> ▪ Estimated level of construction waste recovered during major transport schemes 	<ul style="list-style-type: none"> ▪ Information on Major Transport Infrastructure Projects 	<ul style="list-style-type: none"> ▪ National Roads Authority ▪ RPA ▪ Irish Rail
23. To avoid or, where infeasible, minimise impacts to protected and designated geological and geomorphological sites.	<ul style="list-style-type: none"> ▪ Impacts on designated geological and geomorphological sites (when/if developed) by Implementation Plan transport schemes 	<ul style="list-style-type: none"> ▪ Project level EIA ▪ NPWS Reporting 	<ul style="list-style-type: none"> ▪ National Roads Authority ▪ RPA ▪ Irish Rail ▪ NPWS
24. To protect public assets and infrastructure.	<ul style="list-style-type: none"> ▪ Passenger numbers at GDA Ports and Airports ▪ Public transport use and modal share ▪ Occupancy rates of Bus and Rail ▪ Condition of Public Transport Infrastructure and Quality of Services 	<ul style="list-style-type: none"> ▪ Public Transport Statistics (all modes of transport) ▪ Census data (transport info) ▪ Reporting requirements of PSO Contracts and Licences ▪ Annual Departmental Budgets 	<ul style="list-style-type: none"> ▪ NTA ▪ Central Statistics Office ▪ Dublin Bus ▪ Bus Éireann

	<ul style="list-style-type: none"> ▪ Road, Footpath and Cycle Facility Maintenance Budget 		<ul style="list-style-type: none"> ▪ National Roads Authority ▪ RPA ▪ Irish Rail ▪ Dublin Airport Authority ▪ Dublin Port ▪ Local planning authorities ▪ Department of Transport
25. To reduce the fossil fuel demand by the transport sector.	<ul style="list-style-type: none"> ▪ Public transport use and modal share ▪ Sales of Petrol and Diesel 	<ul style="list-style-type: none"> ▪ Public Transport Statistics (all modes of transport) ▪ Census data (transport info) ▪ Revenue returns 	<ul style="list-style-type: none"> ▪ Central Statistics Office ▪ Revenue
26. To assist with the reuse and regeneration of brownfield sites.	<ul style="list-style-type: none"> ▪ Proportion of development occurring on brownfield sites 	<ul style="list-style-type: none"> ▪ Development Plans ▪ Local Area Plans ▪ Analysis of Planning Permissions and Local Authority Projects ▪ Geo-Directory 	<ul style="list-style-type: none"> ▪ Local Authorities ▪ An Post ▪ Central Statistics Office
27. To avoid or, where infeasible, minimise impacts to designated cultural, architectural and archaeological resources.	<ul style="list-style-type: none"> ▪ Sites affected by implementation of Implementation Plan 	<ul style="list-style-type: none"> ▪ Project level EIA 	<ul style="list-style-type: none"> ▪ Irish Rail ▪ RPA ▪ NRA ▪ Local Authorities