1.0 INTRODUCTION

1.1 PURPOSE OF REPORT

This Environmental Impact Statement (EIS) has been prepared as part of an application for a railway order for Luas Line A1, a proposed 4.2km spur from the existing Luas Red Line.

Luas Line A1 will have new stops at Fettercairn, Cheeverstown, Citywest Campus, Fortunestown and east of the junction between Fortunestown Lane and Garter Lane near Saggart. A detailed description of Luas Line A1 is provided in Chapter 3.0.

The purpose of this EIS is to inform the decision-making process on a railway order for Luas Line A1. Further information on that process is set out in section 1.3 below.

The objectives of this EIS are summarised as follows:

- To identify the likely significant environmental impacts of the proposed Luas Line A1 during the construction and operational phases having regard to the characteristics of the local environment.
- To evaluate the magnitude and significance of likely impacts and to propose appropriate measures to mitigate potential adverse impacts.

1.2 STUDY TEAM

The EIA study team comprised the following contributors:

Contributor	Input
Brian Meehan & Associates, Planning Consultants, 44 Fitzwilliam Place, Dublin 2	Co-ordination of EIS, Introduction, Policy and Planning Context, Description of Project and Alternatives, Socioeconomic and Community, Material Assets, Summary of Impacts and Interactions
Scott Wilson, Unit B First Floor, Bracken Court, Sandyford Industrial Estate, Dublin 18	Transportation
TJ O'Connor & Associates, Corrig House, Corrig Road, Sandyford Industrial Estate, Dublin 18	Soil, Water, Public Utilities
AWN Consulting, Tecpro Building, Clonshaugh Business & Technology Park, Dublin 17	Air Quality and Climatic Factors, Noise and Vibration, Waste Management
Scott Cawley, Ecological Consultants, 27 Lower Baggot Street, Dublin 2	Flora and Fauna
Margaret Gowen & Co, Archaeological Consultants, 27 Merrion Square, Dublin 2	Archaeology, Cultural and Architectural Heritage
Mitchell & Associates, Landscape Architects, Fumbally Court, Fumbally Lane, Dublin 8	Visual/ Landscape
ERA Technology Ltd, Cleeve Road, Leatherhead, Surrey, KT22 7SA, United Kingdom	Electromagnetic Interference

Brian Meehan & Associates were responsible for the co-ordination of the EIA process and production of the final EIS Report.

The Railway Procurement Agency (RPA) as the statutory agency with responsibility for light rail and metro infrastructure projects and the application for a railway order for the Project also contributed significantly to the EIA process and to the compilation of the EIS in particular.

1.3 LEGISLATIVE CONTEXT

1.3.1 RPA

RPA was established under the 2001 Act in December 2001. Its statutory functions include:

- Securing the provision of, or providing, such light railway and metro railway infrastructure as may be determined from time to time by the Minister for Transport.
- Entering into agreements with other persons in order to secure the provision of such railway infrastructure whether by means of a concession, joint venture, public private partnership or any other means.

Following its establishment, RPA completed the construction of the Luas Green and Red Lines, which opened for passenger service in June and September 2004 respectively. These Lines are operated by Veolia Transport (Ireland) Limited under an agreement with RPA.

1.3.2 Transport (Railway Infrastructure) Act, 2001

The regulatory framework for new railway infrastructure is set out in Part 3 of the 2001 Act. The construction, operation and maintenance of new railway works, and the acquisition of the necessary land for those works, may be authorised by a railway order. A railway order may be made by An Bord Pleanála following an application to it.

The 2001 Act was substantially amended by the 2006 Act. The principal change made was to provide that railway orders would be made by An Bord Pleanála rather than the Minister for Transport. All references in this EIS to the 2001 Act are to it as it has been amended, in particular by the 2006 Act.

Section 39 of the 2001 Act requires that the application shall be accompanied by an EIS. That Section states:

"39.—(1) An environmental impact statement shall contain the following information:

(a) a description of the proposed railway works comprising information on the site, design and size of the proposed railway works,

(b) a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects,

(c) the data required to identify and assess the main effects which the proposed railway works are likely to have on the environment,

(d) an outline of the main alternatives studied by the applicant and an indication of the main reasons for its choice, taking into account the environmental effects, and

(e) a summary in non-technical language of the above information.

(2) An environmental impact statement shall, in addition to and by way of explanation or amplification of the specified information referred to in subsection (1), contain further information on the following matters

(a) (i) a description of the physical characteristics of the whole proposed railway works and the land-use requirements during the construction and operational phases,

(ii) an estimate, by type and quantity, of the expected residues and emissions (including water, air and soil pollution, noise, vibration, light, heat and radiation) resulting from the operation of the proposed railway works;

(b) a description of the aspects of the environment likely to be significantly affected by the proposed railway works, including in particular:

(i) human beings, fauna and flora,

(ii) soil, water, air, climatic factors and the landscape,

(iii) material assets, including the architectural and archaeological heritage, and the cultural heritage,

(iv) the inter-relationship between the matters referred to in this paragraph;

(c) a description of the likely significant effects (including direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative) of the proposed railway works on the environment resulting from:

(i) the existence of the proposed railway works,

(ii) the use of natural resources,

(iii) the emission of pollutants, the creation of nuisances and the elimination of waste, and a description of the forecasting methods used to assess the effects on the environment;

(d) an indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information; and

(e) a summary in non-technical language of the above information,

to the extent that such information is relevant to a given stage of the consent procedure and to the specific characteristics of the railway works or type of railway works concerned, and of the environmental features likely to be affected, and the applicant may reasonably be required to compile such information having regard, amongst other things, to current knowledge and methods of assessment."

This EIS has been prepared in accordance with the requirements of section 39.

Section 43 of the 2001 Act sets out the matters to be considered by An Bord Pleanála in deciding whether to make a railway order. One of these is the EIS submitted as part of the application for the order. Submissions made by any person in relation to the application and the report of any oral hearing will also be considered. Also included in the matters to be considered are:

- the likely consequences for proper planning and sustainable development in the area in which it is proposed to carry out the railway works and for the environment of such works; and
- the policies and objectives for the time being of the Government, a State authority, the Minister, planning authorities and any other body which is a public authority whose functions have, or may have, a bearing on the proper planning and sustainable development of cities, towns or other areas, whether urban or rural,

- the national interest and any effect the performance of the Board's functions may have on issues of strategic economic or social importance to the State, and
- the National Spatial Strategy and any regional planning guidelines for the time being in force.

Accordingly, in order to assist in the decision-making process, this EIS also seeks to addresses these matters, in particular in Chapter 2.

1.4 EIA METHODOLOGY

1.4.1 General

The EIA process is a systematic analysis of the proposed development in relation to the existing environment. In relation to the current project, there are essentially four stages:

- Outline and Consideration of Main Alternatives
- EIS Scoping
- EIS Preparation
- Oral Hearing

1.4.2 Outline and Consideration of Main Alternatives

This stage was primarily an information collection exercise to identify environmental constraints and establish the feasibility of potential route corridors taking into account the environmental opportunities and constraints identified. The study informed the consideration of the main alternative route options from an environmental perspective. This matter is dealt with in more detail in section 3.3.

1.4.3 EIS Scoping

The environmental scoping study represented the beginning of the process of developing an EIS. The purpose of the scoping study was to establish the scope and methodology for the EIS and to provide relevant bodies with environmental responsibility and other interested parties with information on the proposed Luas Line A1 and to invite their input to the EIA process.

As part of this study, a draft EIS Scoping Report was submitted to various bodies and stakeholders for comment. Their comments informed the EIA process and enabled the preparation of the final EIS Scoping Report and the detailed environmental assessment of the Project. A list of those consulted and details of responses received are outlined in Appendix 1A.

Public consultation initiatives were also undertaken by the RPA in parallel with the consultation with bodies with environmental responsibility just outlined. This is ongoing and further public consultation initiatives will be taken throughout the course of the Project. Further information on public consultation is set out in paragraph 1.5 below.

This EIS covers the matters included in the final Scoping Report.

1.4.4 EIS Preparation

1.4.4.1 Consultation

Public Consultation

This Section outlines the public consultation initiatives taken by the RPA in respect of the proposed Luas Line A1 and the main issues identified to date. As noted above, consultation with the public in relation to the Project is ongoing.

1.4.4.2 Consultation Initiatives

Public consultation on the proposed Luas Line A1 was initiated on February 23rd 2006 by means of a public launch held at SDCC offices in Tallaght, the distribution of a newsletter and the publication of national and local newspaper notices. This consultation focused on the Line A1 alignment to Fortunestown Lane, the Park and Ride and the four indicative stop locations.

8,000 newsletters were distributed to all addresses in the vicinity of the proposed alignment. This newsletter included a map showing the proposed Luas Line A1. It also confirmed the interest of the RPA in obtaining the views of interested parties and representative organisations.

This newsletter was accompanied by a Freepost postcard for return by recipients. This provided recipients with an opportunity to communicate views and preferences and members of the public a further opportunity to express their views.

The next stage of consultation, which was initiated on September 1st 2006. This announced the extension of Luas Line A1 by a further 1 km terminating just east of Garter Lane. 10,000 newsletters were distributed to the catchment area along the proposed route – approximately 500 to 900 metres either side of the alignment including Citywest Business Campus and nearby residential estates. This newsletter, which was also accompanied by a freepost postcard, included a map showing the proposed extended Luas Line A1. It also confirmed the interest of RPA in obtaining the views of interested parties and representative organisations. In addition this initiative was supported by the publication of national and local newspaper notices.

A public open-day was held on September 4th 2006 at the Civic Offices in Tallaght. The purpose of the open-day was to update members of the public and interested parties on the status of plans for the Project. Members of the public were notified by means of national and local newspaper notices and letters sent to persons who had previously submitted comments about the Project to RPA. Draft design drawings of the Project alignment were available for review at this open-day.

1.4.4.3 Summary of Issues arising from Public Consultation

Around 60 freepost cards were returned in response to the two newsletters that were distributed. A review of the responses indicated:

- a strong welcome for the Project
- local alignment preferences
- one view expressed concerning tram noise
- the need for adequate bicycle storage facilities at stops
- the need for adequate Park and Ride facilities

Following discussions held at the open day referred to above, RPA also held a meeting on September 8th 2006 with Tallaght Partnership, a local development company set up in 1991 to tackle poverty and social exclusion in Tallaght West. A submission was subsequently received from this group outlining suggestions in relation to the Project, including the location of the alignment, the location and security provisions at the Park and Ride and the consultation process. RPA responded in detail to each of the points raised by the group.

RPA remained available to meet with any other interested parties such as housing associations, elected representatives and interested individuals.

Throughout the public consultation process it has been made clear that RPA is glad and willing to consult with interested parties about the Project. Every opportunity to communicate the RPA Freefone number, postal, website and e-mail addresses is availed of and a considerable amount of effort has been devoted to responding to communications already received.

The process of consultation has confirmed enthusiasm for the Project in the area affected by it.

The railway order application being made by RPA takes due account of the matters raised during the consultation.

Throughout the application process interested parties are advised to take the opportunity which will be provided to inspect the plans, EIS and other documents that will accompany the railway order application as these might include changes from plans they may have seen before

Stakeholder Consultation

RPA initiated consultation with bodies with environmental responsibility in February 2006. The focus of this consultation was on the environmental assessment and route selection of the Project.

Substantive responses to this consultation initiative were received from both South Dublin County Council and the Dublin Transportation Office. Other consultees acknowledged receipt of the documents sent to them or made no response.

Discussions between RPA and DTO took place following their submission and DTO has confirmed its support for the Project.

South Dublin County Council has also confirmed its support for the Project.

1.4.4.4 Structure and Content of the EIS

This EIS has been prepared for the preferred route and considers the impact of the route (the "do-something scenario") during the construction and operational phases and compares this to the existing situation (the "do-nothing scenario"). The study has been prepared having regard to the Environmental Protection Agency (EPA) guidance documents in relation to the preparation and content of an EIS which are as follows:-

- Advice Notes on current practice in the preparation of an EIS, EPA (2003)
- Guidelines on the information to be contained in an EIS, EPA (2002)

The Non Technical Summary is presented as a separately bound report.

This document comprises the Main Report and is structured as follows:

Chapters 1.0-3.0 provide an introduction to the Luas Line A1 project, provide some background details and describe the proposed Luas Line A1 scheme. The main "Alternatives" considered are also presented.

Chapters 4.0-15.0 incorporate the main body of the EIS and outline the impacts of the proposed development having regard to the items outlined in Section 39 of the 2001 Act (human beings, fauna and flora, soil, water, air, climatic factors and the landscape, material assets, including the architectural and archaeological heritage, and the cultural heritage, material assets, public utilities and property).

These impact areas are considered under the following Chapter headings:

- Socio-Economic and Community
- Visual and Landscape
- Flora And Fauna
- Archaeology, Architectural Heritage and Cultural Heritage
- Soils
- Water
- Air Quality And Climatatic Factors
- Noise And Vibration
- Material Assets
- Transportation
- Electromagnetic Interference
- Waste Management

Chapter 16.0 summaries the likely significant impacts and the interaction of the above impacts.

Appendices contain background and technical details relating to the proposed development and are attached at the end of this report.

Assessment Terminology

The general approach is to describe the receiving environment and to examine the impacts of the Luas Line A1. Methodologies applied in the assessment of each aspect of the environment are detailed in the relevant chapter including relevant terminology. However, unless stated otherwise, impacts are described based on the EPA *'Guidelines on the Information to be Contained in Environmental Impact Statements' (2002):*

The quality of the impacts is defined as:

■ **Positive**	A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or removing nuisances or improving amenities).
■ **Negative**	A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).
■ **Neutral**	A change which does not affect the quality of the environment.

The significance of the impact is stated as:

■ **Imperceptible**	An impact capable of measurement but without noticeable consequences.
■ **Slight**	An impact which causes noticeable changes in the character of the environment without affecting its sensitivities.
■ **Moderate**	An impact that alters the character of the environment in a manner that is consistent with existing and emerging trends.
■ **Significant**	An impact which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
■ **Profound**	An impact which obliterates sensitive characteristics.

The duration of the impact is, where appropriate, indicated as:

■ **Short-term**	Impact lasting one to seven years.
■ **Medium-term**	Impact lasting seven to fifteen years.
■ **Long-term**	Impact lasting fifteen to sixty years.
■ **Temporary**	Impact lasting for one year or less.
■ **Permanent**	Impact lasting over sixty years.

The type of impact is described, where appropriate, as:

■ **Cumulative**	The addition of many small impacts to create one larger, more significant, impact.
■ **Do-nothing**	The environment as it would be in the future should no development of any kind be carried out.
■ **Indeterminable**	When the full consequences of a change in the environment cannot be described.
■ **Irreversible**	When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
■ **Residual**	The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
■ **Worst-case**	The impacts arising from a development in the case where mitigation measures substantially fail.
■ **Synergistic Impact**	Where the resultant impact is of greater significance than the sum of its constituents.

Interaction with Design Process

The EIA process and the design process were carried out in parallel with constant interaction between both strands. Where no likely significant adverse impacts were predicted to occur, the design of the proposed scheme remained unchanged. Where possible and appropriate, measures to reduce adverse environmental impacts have been incorporated into the project design. Otherwise, where adverse impacts were identified, mitigation measures are proposed in the EIS for the construction and operational phases of the scheme.

Study Area

The geographical area of investigation reflects the extent of the construction and operational impacts for each of the environmental issues considered. For all issues considered, the area of direct impact is taken as that area within the proposed "route corridor" and the temporary land take involving some additional lands which may be occupied during the construction phase. A wider study area or secondary impact area depends on the issue being examined and, where relevant, these areas are described in the relevant chapter.

Forecasting Methods

The individual forecasting methods used to assess the various effects of the proposed Luas Line A1 on the environment are outlined in Chapters 4.0 – 15.0 of this EIS under the subheading 'Assessment Methodology'.

Difficulties Encountered

Some of the lands adjacent to Luas Line A1 are likely to be developed for [mixed residential/commercial] use in the near future. This development will be facilitated by the introduction of light rail. This EIS and the design of the Project has taken account, insofar as possible, for the likely future development of the area.

Subject to this constraint in relation to the future development of the area served by Luas Line A1, no other significant difficulties were encountered in the preparation of the EIS. Any limitations or technical difficulties associated with assessment of an environmental aspect are detailed in the relevant chapter.

1.4.5. Oral Hearing

Under Section 42(1) of the 2001 Act, it is at the discretion of An Bord Pleanála to hold an oral hearing regarding the railway order application.