ENVIRONMENTAL PROTECTION AGENCY WASTE LICENSING
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SECTION 1

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1. INTRODUCTION

1.1 Preamble

Brownfield Restoration Ireland Ltd. (BRI) acquired a ca. 14.6 ha sand and gravel pit for development in Whitestown Lower, Co. Wicklow, in 2003. BRI proposes continuation of sand and gravel extraction and processing, additional infrastructure development, remediation of previously deposited wastes, and restoration of this site by backfilling residual wastes in a fully engineered lined landfill. BRI have contacted Wicklow County Council with a view to obtaining their assistance to ensure that the Polluter Pays Principle is adhered to and that all those persons who have deposited waste at the site will contribute to its ultimate remediation.

An Environmental Impact Statement (EIS) has been prepared (this document) to describe the proposed development, the existing conditions on the site, the environmental status of the site and its environs, and to document the potential likely significant impacts of the proposed development on the environment. The EIS comprises a Non-Technical Summary and thereafter Volumes I – III.

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1.2 Site Location and Summary Description

The location of the site and an outline of the extent of the landholdings are depicted on Figure 1.1. All Figures are attached in Appendix 1, Volume II. The site is located off the primary national route (N81), in the townland of Whitestown Lower, which is ca. 5 km north of Baltinglass, County Wicklow and ca 20 km south of Blessington Co. Wicklow.

The lands have been used for sand and gravel extraction for many decades and as early as 1908 according to an OS 6" map for the area. An aerial photograph taken in 1973 also shows signs of sand gravel extraction on the western side of the site near the existing site entrance.

It has been reported that wastes have been accepted and deposited on these lands for a number of years starting in the late 1970s. Waste activities ceased at the site in November 2001. BRI was not party to any of the previous sand and gravel extraction and processing, or waste disposal activities on the site. It is the aspiration of BRI to remediate the site, operate a commercial waste management facility and restore the site to rolling agricultural land over a 10-year time frame. To realise this aspiration, a Master Plan has been developed as described in more detail below.

BRI retained Environment & Resource Management Ltd (ERML), environmental and engineering consultants, in late November 2003 to assist with the planning, engineering and development of a Master Plan for the site. The scope of the consultancy assignment also included

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preparation of the necessary applications and accompanying Environmental Impact Statement (EIS) to the Environmental Protection Agency and/or the planning authority to obtain the necessary consents for the development that would comprise the Master Plan.

To facilitate the preparation of a Master Plan for the future remediation, development and land restoration of the site, an extensive site investigation (via excavation of 67 No. trial pits to depths of up to 7 metres) in areas of alleged waste deposition was undertaken at the site by ERML, in December 2003. The target area for the December 2003 investigation was east of the overhead power lines that cross the site from north to south. The purpose of this investigation was to ascertain the nature and extent of the imported wastes deposited at the site. Non-inert wastes that were obviously from outside sources were found at varying depths over the eastern part of the site. Three zones of waste have been delineated by ERML. It is noted that it is possible that wastes from stripping the site prior to sand and gravel extraction and from the washing and processing plants are mixed with the imported wastes. It is also noted that wastes from sand and gravel processing have been deposited in areas west of the target area of the December 2003 investigation.

Although there was no visible evidence of foreign material in the western part of the site, the possibility of non-inert wastes being buried in areas west of the power lines cannot be ruled out with a 100% certainty. The wastes that were encountered by ERML appeared to consist of Commercial and Industrial (C&I) (as defined by the WMA, 1996) and Construction & Demolition (C&D) wastes. There was no evidence of hazardous or household wastes (or filled refuse sacks or bags) noted during the December 2003 Investigation.

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It was estimated that between 220,000 and 260,000 tonnes of waste were previously deposited at the site in the three zones delineated by ERML. These wastes represent a source of possible existing or future pollution of groundwater and surface waters. In addition, some of the wastes are biodegradable and thus, there is a high potential for methane and carbon dioxide gases and other traces formed during the natural biodegradation of the wastes, to be released into the environment. A Preliminary Risk Assessment Report is included in Appendix 9, Volume II of the EIS.

The full results of this and other site investigations are reported in Section 3 of this EIS and Appendix 9, Volume II of the EIS.

1.3 Planning Status

To date, supporting information in relation to planning applications for development on the site have not been located despite a thorough investigation for same. A Decision to Grant Planning Permission (2492/78 Wicklow County Council) was located. This Decision was appealed and An

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Bord Pleanála granted planning permission on 28th March 1979 (Ref No. PL 43504). See Appendix 2, Volume II of the EIS for more details on searches for records and the Planning Permission granted by An Bord Pleanala.

1.4 Master Plan for Company Landholding in Whitestown Lower

The Master Plan is to remediate and restore the site. This will include the following activities:

- Recovering and treating previously deposited wastes and imported wastes;
- Restoring the disused pit to a landform that blends into the surrounding landscape through the deposition of the residues of waste treatment processes into fully engineered lined areas.

All previously deposited non-inert wastes at the site will be excavated and put through a treatment and recovery process (i.e. screening to remove fines, removal of recyclables on-site). It is proposed that the excavation of these wastes will be phased over time and should take place within the first two to three years of development.

BRI is contacting parties who have previously deposited wastes at this site in order to ensure conformance with the Polluter Pays Principal. However, it is expected that legal proceedings and solvency status of some parties will preclude generating sufficient funds to properly manage previously deposited wastes in a timely fashion. It is noted that BRI has sought the assistance of Wicklow County Council to achieve the objective of the Polluter Pays Principle.

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It is proposed to accept non-hazardous C&I, Household Wastes and C&D wastes at the facility for recovery and residual disposal. It is also proposed to accept source separated organic (green waste and food waste) waste for composting and source separated recyclable wastes for further processing (i.e. sorting, baling) at the site.

BRI also envisages that this facility could be used to assist in the remediation and restoration of other pits, quarries and other lands in County Wicklow that have been used for unauthorised waste activities. Non hazardous wastes commingled with inert soil from other unauthorised landfills could be hauled to the BRI facility for treatment and recovery. Recovered inert materials could then be transferred back to the site of origin, subject to the appropriate consents being in place.

Recovered materials generated from all waste streams will be utilised on-site where possible, for site restoration. Recovered wastes not suitable for

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use on-site, or recovered wastes that cannot be used onsite will be exported off-site to an appropriate recovery/recycling facility.

Also proposed is the development of a lined landfill for disposal of residual wastes generated from the recovery and treatment of previously deposited and imported wastes. Wastes not suitable for disposal on-site will also be exported to an appropriate facility.

It should be noted that no sand and gravel extraction works or waste disposal has taken place in the two clearly defined fields, on the southeast side of the property, which are adjacent to the Carrigower River. The proposed Master Plan does not include development or use of these fields (i.e. for recovery of wastes or disposal of residual wastes).

In summary BRI proposes to carry out the following works and activities:

- Contouring and landscaping the existing site;
- Development of site infrastructure i.e. site entrance roads, services, security systems, drainage systems, buildings, offices and hardstands;
- Construction of a Resource Recovery Building (RRB);
- Set-up of Mobile Waste Recovery Units (MRU);
- Development of composting infrastructure (a Centralised Composting Facility (CCF) attached to the RRB), for green wastes and food wastes;
- Excavation of previously deposited wastes;
- Treatment and Recovery of previously deposited wastes;
- Receipt of imported Household, C&I and C&D wastes;
- Treatment and Recovery of imported Household, C&I and C&D wastes;
- Development of a fully engineered lined landfill for the residues of the waste treatment processes.

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It is expected that the project will last 10 years and is planned that waste importation will be up to 180,000 tonnes per year over an 8 year period. The last two years of the project will be dedicated to closure and restoration works.

Further details of the Master Plan are presented in Section 2 of this Environmental Impact Statement (EIS).

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1.5 The Applicants

Brownfield Restoration Ireland Ltd. (Company No. 375643) was formed in 2003 prior to the purchase of the lands at Whitestown Lower.

The company directors, Mr. and Mrs. Stokes, of 7 Ardilea Downs, Mount Anville Road, Dublin 14 have a number of other land development companies. They have been involved in land development for in excess of 20 years.

The Company's activities are focused on rehabilitating and restoring this site. Also, it is expected that there will be opportunities to assist in the remediation and restoration of other nearby similar sites, at which there has been unauthorised waste management activities in the past.

1.6 Need

There is a clear need to remediate sites at which unauthorised waste management activities have taken place in County Wicklow.

Coupled with this, the Planning Permission Condition 4 (b) required a scheme to be submitted to the Planning Authority for its approval, for landscaping and reinstatement of the lands. (See Appendix 2 in Volume II). Thus, it can be inferred that the planning authority envisaged restoration activities on the site with such a condition in place.

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The general approach to remediation and restoration was described in Section 1.1. It involves the processing of wastes previously deposited on the site and receipt of imported wastes for recovery and disposal.

The development of this waste management infrastructure will also facilitate some of the local and national waste management requirements.

To assist with assessing the need for the proposed remediation and restoration of the site and development of a waste management facility at Whitestown Lower, a number of sources of documentation were consulted as follows:

- Wicklow County Development Plan
- Waste Permits for Co. Wicklow
- Waste Licences for Co. Wicklow
- Waste Generation in Ireland & Co. Wicklow
- EU & National Waste Policy
- County Wicklow Waste Management Plan (2000-2004)

Using the information collected, it is concluded that there is an obvious and well-documented need for well-engineered waste management

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facilities in Ireland. This has arisen and exists because of a number of factors including:

- The economic boom in the country over the last decade has resulted in increases in population in urban area, which has resulted in a significant increase in all waste streams;
- Increased enforcement by local authorities and the EPA on illegal waste activities in the country;
- Tougher environmental legislation requiring the permitting or licensing of all waste disposal and recovery facilities in the country by either the Local Authority or the Environmental Protection Agency;
- Government Policy Documents i.e. *"Changing our Ways"* (September 1998) and *"Delivering Change"* (March 2002) highlighting the need for C&D Recycling, commercial waste recycling and engineered landfills in the country.

This proposed development comprises an integrated waste recovery and disposal facility to remediate a potential source of pollution, whilst at the same time enhance and supplement the waste-management infrastructure of County Wicklow, and help the Council fulfil government policy.

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1.7 Alternatives

The developer's Master Plan is to remediate and restore the site. This will include the following activities:

- Recovering and treating previously deposited wastes and imported wastes;
- Restoring the disused pit to a landform that blends into the surrounding landscape through the deposition of the residues of waste treatment processes into fully engineered lined cells.

The alternatives to this plan are:

1. Do nothing (i.e. do not remediate the site);
2. Excavate, treat and recover previously deposited waste and dispose of residual waste off-site at a licensed facility;
3. Excavate, treat and recover previously deposited waste and dispose of residual waste on-site at a fully engineered lined landfill;
4. Excavate and recover previously deposited waste and receive imported commercial, industrial and domestic waste for recovery. Dispose of residual waste from both waste streams on-site in a fully engineered landfill (i.e. the developer's master plan for the site).

Alternative 1 ignores the opportunity to remediate the existing site and recover and recycle various wastes. If the site were to be left in its

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current status, as outlined in the existing environment sections of this EIS, the site and its environs are likely to deteriorate due to the ongoing decomposition of deposited wastes. This may ultimately involve impacts to both the groundwater and surface water environments in particular, and possibly the adjoining aquatic environment, which has international significance. A Preliminary Risk Assessment has been undertaken at the Whitestown site, details of which are included in Appendix 9, Volume II of EIS.

Alternative 2 represents meaningful and necessary but economically unfeasible activities. Without additional revenue from incoming wastes at the site, there would be an economical shortfall, which is needed to meet the engineering infrastructural requirements for this alternative.

In addition, the national waste crisis means that obtaining capacity at other licensed landfills for the waste is extremely difficult, if not impossible. For example, the nearest licensed landfill, the Wicklow County Council operated landfill at Rampere, has a remaining capacity of between 250,000-300,000 m^3, based on the current PD Licence No. 66-2.

Assuming an average incoming waste density of 0.7 t/m^3, this corresponds to 175,000-210,000 tonnes to be accepted over a ca. 4-year period at the Rampere facility. Compared with the estimated quantities of waste at this site (ca. 240,000 tonnes), this illustrates the difficulties in achieving Alternative 2.

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Alternative 3 represents meaningful and necessary but economically unfeasible activities. There would be a shortfall in revenue needed to meet the full engineering requirements proposed for the required recovery and disposal facility and possible significant delays while the legal process is pursued.

Alternative 4 ensures that previously deposited wastes are dealt with in an appropriate manner and facilitates the restoration of the site in an economically viable manner, while ensuring that the 'Polluter Pays Principle' is adhered to. The developer intends to pursue this alternative.

1.8 Public Bodies Consulted

As part of the Environmental Impact Assessment process, the following public bodies were consulted, and in most cases preliminary meetings were held to identify issues to be addressed in this EIS. Details of consultations are outlined in Table 1.8.1.

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Table 1.8.1: Public Bodies Consulted

Consultation Body	Date	Method of Consultation
Environmental Protection Agency	February '04	Meeting with Senior Inspectors
Wicklow County Council (Various Departments)	February '04	Meeting, Letter Consultations, with Planning, Environment & Sanitary
Eastern Fisheries Board	January '04	Letter Consultations
Dept. of. Environment, Heritage & Local Government	March '04	Letter Consultations
Electricity Supply Board	March '04	On site Meeting, Letter Consultations

1.9 Structure of the EIS

The EIS is presented in the "Grouped Format Structure" as set down in the Environmental Protection Agency (EPA) booklet – *Guidelines on the Information to be contained in Environmental Impact Statements*, March 2002. In general, it follows the framework presented in the EPA booklet - *Advice Notes on Current Practice (in the Preparation of Environmental Impact Statements)*, September 2003.

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The structure employed is as follows:

Non-Technical Summary

Section 1 Introduction

Section 2 The Proposed Facility

Section 3 The Receiving Environment

To assist with the assessment and increase clarity, Section 3 of the EIS will be systematically organised to provide sections describing:

- Existing environment
- Potential emissions
- Description of likely impacts
- Mitigation measures
- Likely significant impacts

Section 4 Environmental Monitoring

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1.10 Contributors to the EIS

Environment & Resource Management Ltd. (ERML) was retained to project manage and prepare this EIS. A number of specialist consulting firms assisted in the preparation of this EIS. Information is provided in Table 1.10.1.

Table 1.10.1: Contributors to the EIS and their Responsibilities

Consultants	Address	Responsibility
Environment & Resource Management Ltd	No. 3 Tara Court, Dublin Road Naas, County Kildare	▪ Project Management ▪ Report assembly ▪ Air ▪ Climate ▪ Human Beings ▪ Soils, Geology & Groundwater ▪ Noise ▪ Surface Water ▪ Material Assets ▪ Interrelationships
Cultural Resource Development Services Ltd.	Unit 4, Dundrum Business Pk. Dundrum Road, D. 14	▪ Cultural & Archeological Heritage
Natura Environmental Consultants	Enterprise Centre, The Murrough, Wicklow	▪ Baseline Ecological Assessment
Roger Goodwillie & Associates	Lavistown House, Kilkenny.	▪ Ecological Impact Assessment
Traffic Wise Ltd	Bracetown Business Pk. Clonee, Co. Dublin	▪ Traffic Assessment
Michael Cregan and Associates Environmental Planning & Landscape Architects	6 Brockville Park, Blackrock, Co. Dublin.	▪ Landscape Assessment
Martin Murray Architects	No. 3 Tara Court, Dublin Road, Naas, Co. Kildare.	

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1.11 Data Necessary to Identify and Assess Environmental Effects of the Development

The data necessary to identify and assess the environmental effects of the development are:

- The characteristics of the development including its physical dimensions, volumes, rates of intake, nature of materials being accepted, and the appearance and condition of the site from the operations as described in Sections 2;

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- The existing/receiving environment, emissions and mitigation measures as described in Section 3;
- The proposed monitoring plan as described in Section 4.

1.12 Difficulties Encountered in Compiling any Specified Information

Much of the specified information was already available to the operators and its consultants or else was obtained through previously commissioned surveys/ investigations and more recent site investigations carried out in December 2003/ January 2004.

1.13 Forecasting Methods Used to Assess any Effects on the Environment

Professional judgement based on site reconnaissance, desktop studies and calculations were used to assess effects on the environment.

1.14 Compliance with Requirements of Environmental Impact Assessment Regulations – Second Schedule SI 93 of 1999 and Sixth Schedule of S.I. No. 600 of 2001.

The information to be contained in an EIS is specified in the Second Schedule of S.I. 93 of 1999 and the Sixth Schedule of S.I. No. 600 of 2001. These EIA requirements derive from European Communities Directive 85/337/EEC (as amended by Directive 97/11/EC). Table 1.13.1 describes where the required information may be found.

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Table 1.13.1: EIS Checklist

S.I. No. 93 of 1999 & 600 of 2001	Second Schedule. Items (abbreviated)	Location in EIS
1. (a)	Description of Proposed Development	Sections 1 and 2
(b)	Description of Mitigation Measures	Section 3
(c)	Data Required to Identify and Assess Effects	Sections 1.10, 2.1 and 3
(d)	Outline of the Main Alternatives Studied	Section 1.7
2. (a) (i)	Description of Physical Characteristics of the Development and Land Use Requirements	Sections 1 and 2
(ii)	Description of the Main Characteristics of the Production Process	Sections 2.1 - 2.4
(iii)	Estimates, by Type and Quantity of Expected Residues and Emissions	Section 2
(b)	Description of the Aspects of the Environment likely to be Significantly Affected by the Proposed Development Including in Particular: - Air - Climate - Cultural and Archaeological Heritage - Flora and Fauna - Human Beings - Traffic - Soils, Geology & Groundwater - Landscape - Noise - Surface Water - Inter-relationship of the above factors	Section 3.1 Section 3.2 Section 3.3 Sections 3.4 Section 3.5 Section 3.6 Section 3.7 Section 3.8 Section 3.9 Section 3.10 Section 3.12
(c)	Description of the Likely Significant Effects	Section 3
	Description of Forecasting Methods Used to Assess the Effects on the Environment	Section 1.13
(d)	Indication of any Difficulties Encountered by the Developer in Compiling the Required Information	Section 1.12

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