

Appendix 13

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ENVIRONMENTAL PROTECTION
AGENCY WASTE LICENSING
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INITIALS.....

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Landscape and Visual Impact Assessment

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In Association with -

(Martin Murray Architects)

WHITESTOWN, Co. WICKLOW

Proposed Integrated Waste Management Facility

Landscape and Visual Impact Assessment

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WHITESTOWN LOWER - LANDSCAPE AND VISUAL ASSESSMENT

1.0 INTRODUCTION

The scope of the landscape and visual impact assessment study is as follows:

- To establish a baseline condition by describing the landscape of the site and visual influences in the surrounding area;
- To identify the potential impacts on the baseline condition during site development and operation;
- To assess and register the significance of the effects on the baseline conditions; and
- To develop mitigation measures that would diminish the effects of the changes or enhance the effects as appropriate.

Desktop studies were undertaken to obtain a general account of the surrounding landscape including material on its history and formation, and information on Wicklow County Council policies and studies that would be pertinent to the Environmental Impact Statement. Additionally, maps were examined to determine the likely, or any, areas of visual influence. Maps at 1:126,720 and 1:50,000 OS of Ireland [nos. 55,56] were examined and used to define the catchments of the study area. The study area was defined as the development site and areas /positions from which the development would be visible. Visibility was determined from a consideration of relief, settlement pattern, settlements and topography.

It was determined from the above that the primary study area (sometimes termed the "visual envelope") was approximately four sq. km.

The study included site visits to survey the site and surrounding area and to record landscape character, features and elements, and visual factors. A photographic record of the site was made as part of the site survey and transferred to digital format.

The survey was undertaken on the 16th February 2004. Weather conditions during the survey were adequate with an overcast sky but visibility was sufficient to enable a viewing of the site from within the visual envelope.

The following guidelines and texts were used: -

- *Draft Guidelines for the preparation of Environmental Impact Statements* (Environmental Protection Agency, 1996)
- *Guidelines on the information to be contained in Environmental Impact Statements* (Environmental Protection Agency, 2002)

- *Guidelines for Landscape and Visual Impact Assessment* (Landscape Institute and the Institute of Environmental Assessment, 1995)
- *Guidelines on the Methodology for Multi Modal Studies*. Vol.2 (UK Dept of the Environment, Transport and the Regions, 2000)

2.0 Receiving Environment

The site is located in southwest Wicklow adjoining the N81 in the townland of Whitestone Lower and ca. 8 km north of Baltinglass. The site is an active sand /gravel pit, ca. 14.6 ha. in extent, however has been dormant in the recent past. A portion of the lands was backfilled with imported wastes in the recent past. The site has never been subjected to remedial measure and in consequence has disfigured the otherwise attractive and valuable landscape with exposed faces and substantial piles of deposited debris and previously deposited wastes.

The site is in a valley and above the flood plain of the River Carrigower, which runs from north to south and flows into the river Slaney a short distance south of the site. The valley slopes are defined by a continuous ridge to the west and by lands rising to a secondary road to the east and then continuing to rise to the prominence of Fauna [315m OD]. Lands to the west of the N81 rise steeply onto another ridge, which terminate at Staffords Hill [288m OD] southwest of the site.

The lands are primarily in agricultural use. The lands to the east of the site beyond the secondary road are enclosed by rising ground, and by a conifer plantation, on the slopes of Fauna. Lands to the west and the south are broadly undulating and open with small to medium fields defined by straggly hedges and mature open hedgerow trees, predominantly Ash, and with shelterbelts and copses (Ash, Beech, Hawthorn and Willow] in the vicinity of residences and farmhouses.

There are seven residences located on the minor road to the east immediately above the site. There are residences in the vicinity of the site on the N 81 and a number of residences on the ridge and slopes to the west and southwest of the N81.

Site vegetation consists of a low straggly hedge to the north of the site and narrow belt of low trees on a ridge on the west boundary and a cluster of trees on the southern boundary.

The River Carrigower and its adjacent flood plain are included within the River Slaney candidate Special Area of Conservation (site code no. 000781). It is understood that the River Slaney cSAC was extended in May 2003 to include River Carrigower on account of its importance as a spawning tributary.

3.0 Characteristics of the Proposal

The proposed developments as set out in the master plan (section 2 of the EIS) involve the remediation and restoration of the site and will include the recovery of previously deposited wastes and the restoration of the disused pit to conform with the contours of the surrounding landscape.

The works will additionally include the following elements to enable the above actions -:

- o A tar macadam access road and jeep track
- o A weighbridge
- o A car parking area
- o A site office
- o A gas flare compound
- o Leachate tanks
- o A resource recycling building (RRB)
- o Offices and canteen facilities
- o Surface water management ponds

This assessment is made to determine the capacity of the landscape to absorb change and to identify the location of visual receptors relative to the proposed development.

3.1 Potential Impact of the Proposal

The significance of impacts is based on the Glossary of Impacts in the Environmental Protection Agency document¹

Imperceptible Impact

An impact capable of measurement but without noticeable consequences

Slight Impact

An impact, which causes noticeable changes in the character of the environment without affecting sensitivities

Moderate Impact

An impact that alters the character of the environment in a manner that is consistent with existing and emerging trends

Significant Impact

An impact, which by its character, magnitude, duration, or intensity alters a sensitive aspect of the environment

Profound Impact

An impact, which obliterates sensitive characteristics

¹ Guidelines on the information to be contained in Environmental Impact Statements (EPA 2002)

Reference would also be made to the quality, duration and types of impacts as set out in the Glossary.

Visual Impacts are defined as 'Visual Intrusion' and 'Visual Obstruction' and are graded as *Low, Moderate, High and Severe* where:

Visual Intrusion is concerned with the relative perception of visual impact based on the degree to which a proposed structure or development impinges on a view without blocking it.

Visual Obstruction is defined as the blocking or screening of a view

In the instance of visual intrusion the nature of the impact will be dependent on the change to the existing view resulting from factors which would primarily include -:

- The contrast between the existing and proposed view
- The removal of existing features
- The alteration of landform and topography
- The proximity of the viewpoint

3.2 Construction Phase

The proposed developments are essentially entirely in the category 'construction works' as the works consist of restoration of a disturbed landscape to its former profile and subsequent use as agricultural lands.

Visual impacts are inevitable during the construction phases of the remediation and grading works. In general the construction programme will give rise to impacts relating to -:

- o Contractors compounds and other site buildings –notably the gas flare compound and the resource recovery building.
- o The access and service road.
- o Construction activity including preliminary site works, equipment operation, earth/debris moving and grading of materials to finished levels for the duration of the construction works.

The works will be carried out in phases and completed over an estimated ten year period from the date of commencement, which will include final planting works.

The construction works above will have impacts ranging from slight to significant, depending on the type of activities been undertaken during each phase, and may be present for the duration of the contract. However, with the exception of the gas flare compound, all other elements will be entirely removed off site upon completion of the contract, within a period of ca. 8 years. The gas compound will remain on site for a longer period of ca. 15 years.

3.3 Operational Phase

The completed works will have potential impacts within the larger landscape and will have immediate impacts on a number of receptors in the vicinity of the site.

The proposed works entail -:

- o The removal of all infrastructure upon completion of the works
- o The removal of an unsightly quarry and the restoration of an agricultural landscape

The impact will be in the category 'imperceptible' with no visual impact in the context of the larger landscape,

4.0 Avoidance, Remedial or Reductive Measures

4.1 Construction phase

A visual impact is inevitable during the construction phase. Residences on the secondary road to the east of the site are the primary visual receptors. Residences to the west and southwest of the site are also receptors. Their view of the site is significantly less acute by virtue of distance, topography and existing vegetation. The view from the N81 is quite restricted because of the steeply sloping lands and vegetation between the road and the site.

Impacts can be mitigated to a reasonable degree by appropriate site management measures and work practices. Compound locations and other infrastructure elements will be sited in areas where there visual impact will not be significant particularly with reference to the view from the east. Planting trees and hedges to mitigate visual effects will reduce the impacts arising from the works. The character of the surrounding landscape is formed by the hedgerows as linear boundary features in combination with copses, small woodland and windbreaks around houses. The planting design for mitigation will attempt to reproduce this form of planting in the landscape

Mitigation measures will include -:

- o The initial screening of the entire site along its boundary by extensive planting to a minimum depth of 3m. This work will be carried out immediately upon commencement of the contract.
- o The planting at intervals of 10m - 20m of small copses to a depth of 6 - 7m
- o The use of indigenous trees and shrubs densely planted as whips and transplants. Species will include Ash, Hawthorn, Beech and Willow
- o The reinstatement of field boundaries as they existed prior to the sand /gravel extraction works. This will involve planting Thorn /Ash hedgerows and in phases corresponding to the master plan

- o The careful contouring of the finished grades to create landforms in sympathy with the adjoining ridge lines above the river valley
- o The careful siting and design of proposed water attenuation areas to provide amenity and wild life conservation opportunities

5.0 Predicted Impact of the Proposal

5.1 Construction Phase

The temporary construction impacts will have visual and disturbance effects in a number of categories: -

- o The main contractors compound and its use as a temporary storage and work area
- o The resource recovery building and other built structures on site
- o The movement of plant and vehicles in and out of the site during construction along the road system
- o The operation of plant on the site during the course of the contract

Proper selection of location for the built elements will reduce the degree of impact, which will be temporary in duration as indicated previously.

The impacts will reduce significantly as the planting matures. The planting which will be installed around the perimeter and along the previous field boundaries will be extensive and dense and have a considerable effect in reducing the visual impact of the scheme and screen it from adjoining properties and from the identified critical receptors. The choice of plant materials will be indigenous to the region and thus harmonise generally with the landscape.

In the medium term as the proposed new landscape treatment matures, the impacts will gradually reduce and be increasingly perceived as neutral

5.2 'Worst Case' Scenario

A 'worst case' scenario would arise only if the site was left in its present condition or if the finished grades were by the size and bulk unsympathetic to the ambient landscape. Implementation of the remedial measures and the associated planting works will ensure a very significant reduction of the current impacts and the harmonious reinstatement of the landscape.

Tab A

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Photographs

Tab B

Planting Schedule

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Proposed Integrated Waste Management Facility at Whitestown Lower, Co. Wicklow for Brownfield Restoration Ireland Ltd.

Planting Schedules

Schedule A Site Boundary

Plants at 1.5m centres as 900 – 1200mm whips

Acer campestre	25%
Fraxinus excelsior	35%
Malus sylvestris	25%
Corylus avellana	10%
Ilex aquifolium	5%

Schedule B Copses on site boundary

Plants at 2m centres as 2+1 transplants [trees]
800mm plants [shrubs]

Fagus sylvatica	70%
Prunus avium	10%
Sambucus niger	10%
Euonymus europaeus	10%

Schedule C Wet Grassland Area (Southeast of site)

Planted at 1.5m centres 900mm – 1200 mm whips [trees]
800mm plants [shrubs]

Alnus glutinosa	35%
Betula pubescens	40%
Rhamnus cathartica	10%
Salix atrocinerea	10%
Viburnum opulus	5%

Schedule D Hedgerows on re-instated field boundaries

Planted in two staggered rows at 400mm centres as 2+1 transplants 900mm[trees]
800mm plants [shrubs]

Crataegus monogyna	75%
Prunus spinosa	5%
Acer campestre	10%
Malus sylvestris	5%
Rhamnus cathartica	5%

Grassland

200mm selected approved topsoil on min.depth 600mm selected subsoil

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Tab C

Landscape Drawings

LA-002

LA-003

LA-004

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- LEGEND**
- BUSINESS
 - HOUSE
 - FARM
 - APPLICATION SITE BOUNDARY
 - NATIONAL SECONDARY ROUTE
 - REGIONAL ROAD
 - MINOR ROAD
 - TOWNLAND BOUNDARY
 - 500m OFFSET FROM BOUNDARY
 - STREAM / WATER COURSE
 - EXISTING OR FORMER SAND AND GRAVEL PITS
 - PHOTOGRAPH LOCATION WITH DIRECTION OF VIEW

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LEVEL ONE	DATE	ISSUE	STATUS	JOB TITLE	DRW NO	DRW NO	SCALE	DATE	STATUS
				PROPOSED INTEGRATED WASTE MANAGEMENT FACILITY at WHITESTOWN LOWER, CO. WICKLOW, FOR BROWNFIELD RESTORATION IRELAND LTD	1249	LA-001	1:10,000 (A3)	MAR 2004	EIS
<p>PHOTOGRAPH LOCATIONS</p> <p>DRW BY: C.B.</p>									
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