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**PART I**  
**BACKGROUND INFORMATION**

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**KIRK MCCLURE  
MORTON**

## 1.0 INTRODUCTION

### BACKGROUND

- 1.1 Donegal County Council are proposing to develop an extension to their existing landfill facility at Ballynacarrick, near Ballintra, in the south of the County, as shown in Figure 1.1. The existing landfill is operated by the Council, and licensed by the Environmental Protection Agency (EPA Licence Number 24-1).
- 1.2 The proposal to extend the existing landfill has to be seen in the context of the Donegal Waste Management Plan, which was the subject of widespread public consultation, and adopted by the Council in 2000. This Plan identified the need for an additional 2 - 4 landfill facilities in Donegal, to provide secure long-term disposal for the County. It is also supported by a site selection study, undertaken by Donegal County Council, as to alternative sites, which is described further in Section 4 of this EIS.
- 1.3 The existing site, which covers an area of 5.5 hectares, is an older generation landfill that was initially developed on a 'dilute and disperse' basis, in accordance with accepted practices at that time. The latest cell of the existing landfill however, has been developed on a 'containment' basis, in accordance with the standards set out in Council Directive (1999/31/EC) on the Landfilling of Waste, otherwise known as the Landfill Directive, and the requirements of the Waste Management Licence issued by the Environmental Protection Agency (EPA Licence Number 24-1). The proposed extension, which is 3.5 hectares in area, would be developed and operated on the same 'containment' basis.
- 1.4 The site, which will accept up to 24,000 tonnes per annum, will be classified as a non-hazardous landfill to accept household, commercial and industrial wastes from within the County. In principle, the provisions for the development, operation and closure of the landfill include:
- A lining system, to contain leachate, and prevent an adverse impact on groundwater and surface waters.
  - A leachate collection and treatment system.
  - A gas collection system, to reduce the escape of landfill gas into the atmosphere, by collecting and flaring off the gas.
  - Waste acceptance procedures to control the waste accepted at the site.
  - Operational procedures to ensure the placement and cover of the wastes, to minimise any impact on the amenity of the area.
  - Capping and restoration of the site, to reduce the long term impacts, and allow the site to be restored for a beneficial after-use.

- 1.5 The extension to the landfill would be operational for 8-9 years, representing the first stage in the development of the secure long-term landfill disposal capacity for the County, in accordance with the Waste Management Plan.
- 1.6 The Council are also considering the development of recycling and recovery facilities within the County, in accordance with the Waste Management Plan. It is recognised that one option would be to provide an integrated waste management facility at the site, incorporating materials recovery and recycling infrastructure, with the disposal of residues to the landfill. However, given the limited life of the proposed extension, compared to the long term nature of a recycling and recovery facility, the two are not inter-linked. Planning Permission was granted for the development of a Civic Amenity facility at the entrance to the existing site in July 2003 (Reference PG 03/126) and construction of this is due to commence in 2004.
- 1.7 Statutory authorisations, in the form of an application for Approval by An Bord Pleanála, and a Waste Management Licence, issued by the Environmental Protection Agency, are required before the proposed extension to the landfill can be developed and operated. This Environmental Impact Statement therefore has been prepared in support of the applications for these statutory consents.

#### THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

- 1.8 The purpose of undertaking an Environmental Impact Assessment (EIA) is to systematically identify and analyse objectively the effects of a proposed development on the environment, and incorporate mitigating measures where necessary and appropriate to reduce adverse impacts. The output from the EIA process is presented in an Environmental Impact Statement (EIS). A key function of the EIS is to present the data and analyses in a clear and understandable format, to inform the competent authorities, interested parties, and the public, as to the nature and scale of the project, the predicted environmental impacts, and how these are addressed to reduce any adverse impacts to acceptable levels, in order that informed decisions can be made.
- 1.9 The Environmental Impact Assessment process is covered by legislation, namely the European Communities (Environmental Impact Assessment) Regulations, 1989 (85/337/EEC), as amended in regulations including European Communities (Environmental Impact Assessment) (Amendment) Regulations, 2001. The Directive made the assessment of the environmental effects of a project a mandatory requirement for those projects likely to have a significant effect on the environment.

1.10 It is a requirement of the legislation that an Environmental Impact Assessment should consider the effects of a development on:

- Human Beings
- Flora and Fauna
- Soil
- Water
- Air
- Climatic Factors
- Landscape
- Materials Assets, including Architectural and Archaeological Heritage and the Cultural Heritage
- The inter-relationship between the above.

1.11 The scope of an EIA is defined in principle by the above-noted headings. However, the EIA process is dynamic and iterative, with information and data feeding back into the overall process to provide further focus, refinement and definition, as it becomes available. At the outset, it is important to refine the scope, as far as possible at that time, in order to confirm the nature of the development, the breadth of the environmental assessment, the range of key issues and the extent to which each environmental issue needs to be investigated. As part of the initial scoping exercise therefore, letters were sent out in July 2002 to some 42 organisations, comprising both statutory consultees and other non-statutory organisations, requesting any available information that they may have about the site or the general area and/or comments or concerns about the proposed development. The responses received are summarised in Table 1.1, with a full list of organisations contacted at that time, and a copy of the responses, included in Appendix A.

1.12 In addition to the above, as an integral part of the EIA process, a public consultation exercise was undertaken, with a twofold purpose:

- To inform the public about the proposal under consideration by Donegal County Council; and
- To seek views as to the issues, concerns, and the appropriateness of the proposed development.

The public consultation was undertaken by means of a display at St Bridget's Community Centre, Ballintra on the 4<sup>th</sup> of December 2002, and was facilitated by Community and Enterprise Division of Donegal County Council. A report on the public consultation is included in Appendix B, with the key issues identified summarised in Table 1.2 below.

**Table 1.1 Consultee Responses**

<b>Consultee</b>	<b>Issues Raised and Comments</b>
<b>Northern Regional Fisheries Board</b>	The Board has limited information on the Durnish Lake system regarding the fish populations, principally sea trout and some details on macro-invertebrates and macrophytes.
<b>Enterprise Ireland</b>	No additional information other than what was already presented.
<b>Duchas – The Heritage Service</b>	It is necessary that a suitably qualified archaeologist be employed to carry out an Archaeological Assessment. The Assessment shall include: <ul style="list-style-type: none"> <li>▪ Documentary and map research</li> <li>▪ Site visits and full survey of the proposed development site</li> <li>▪ An Archaeology Impact Assessment and Visual Amenity Impact Assessment</li> <li>▪ Recommended mitigatory measures</li> </ul> Duchas has also requested that a copy of an EIS be submitted to them
<b>Development Applications Section</b>	No comments were made in relation to nature conservation recommendations from Duchas.
<b>Health Research Board</b>	No comments other than a report will be scheduled for the end of September 2002 on the health and environmental impact of Landfill and Incinerators.
<b>Teagasc</b>	Commented on the geology of the area and asked that hydrology reports being procured should be examined in detail so that the best approach is taken. They also commented on the risk of the potential spread of disease in animals.
<b>Health and Safety Authority</b>	Based on the information provided to the Authority, Regulation 4(2)(e) of SI 476 of 2000 states that the Regulations do not apply to waste landfill sites.
<b>Forest Service</b>	No specific comments to make.
<b>Geological Survey of Ireland</b>	The GSI are of the view that the bedrock and Quaternary geology should be an integral part of the assessment process as they have considerable impacts on other aspects such as hydrogeology and ground conditions for traffic and construction.
<b>National Roads Authority</b>	The NRA will rely on DCC to abide by the national policy in relation to frontage development on national roads.
<b>Department of Enterprise, Trade and Employment</b>	The Department has no observations on the matter.
<b>Environmental Protection Agency</b>	The EPA recommended following two published documents namely; "Advice Notes on Current Practice in the Preparation of EIS" (1995) and guidelines on the Information to be contained in EIS 2002.
<b>Department of Agriculture and Food</b>	The department has no comment to offer on the issue.
<b>Birdwatch Ireland</b>	Birdwatch Ireland stated that the development is not of much concern as it is an extension of an existing landfill. It is also not in close proximity to Murvagh, site of wintering geese and swans, and is likely not to have any affect.
<b>An Bord Pleanála</b>	An Bord Pleanála can undertake a formal scoping process set out at article 117 of the Planning and Development Act, 2000.
<b>The Heritage Council</b>	Council recommended that Duchas - The Heritage Service be contacted for specific information relating to any heritage assets, which may be present in the study area.

**Table 1.2 Issues raised at public consultation.**

<b>Issue</b>	<b>Main concerns /Issues</b>
<b>Traffic</b>	<ul style="list-style-type: none"> <li>▪ Heavy slow moving vehicles going to and from site are a nuisance factor. There is a need for passing bays as the road is too narrow.</li> <li>▪ Which direction is traffic going. Preferable that vehicles would not use bog road as unsuitable for heavy traffic. How will vehicles be made to use specific routes to/from landfill site as this is shortest route to site.</li> <li>▪ Queueing of vehicles outside residential property adjacent to the facility is causing a nuisance</li> <li>▪ What is the speed limit on the road. No signage to indicate same.</li> <li>▪ Traffic creates problem for people walking.</li> </ul>
<b>Hydrology</b>	<ul style="list-style-type: none"> <li>▪ Where will the stream be directed to.</li> <li>▪ Contamination of stream by the current landfill site.</li> </ul>
<b>Hydrogeology-</b>	<ul style="list-style-type: none"> <li>▪ Concern about the ongoing impact of the landfill site on water quality for the local residents. There is a well located to the Northwest of the site. There are group water schemes to the west of the site.</li> <li>▪ Where is the pollution from the site going.</li> </ul>
<b>Air Quality</b>	<ul style="list-style-type: none"> <li>▪ Smell from site</li> </ul>
<b>Visual</b>	<ul style="list-style-type: none"> <li>▪ Site can be seen from local residents houses.</li> <li>▪ What height will the extension be?</li> </ul>
<b>Waste Management</b>	<ul style="list-style-type: none"> <li>▪ There is a need for the provision of different bins and skips in order to control what is actually going to the dump.</li> <li>▪ How many landfill sites will there be in County Donegal.</li> <li>▪ How long will the site be in operation.</li> <li>▪ Will the site be extended in the future, what is there to stop more cells being developed if the land is available?</li> <li>▪ Will waste be accepted from Sligo.</li> </ul>
<b>Site Operations</b>	<ul style="list-style-type: none"> <li>▪ Site security to prevent children entering site.</li> <li>▪ Requires proper pest control. How will flies, birds be controlled?</li> <li>▪ Problems with existing site in relation to flies.</li> <li>▪ How will litter be managed?</li> </ul>
<b>Flora and Fauna</b>	<ul style="list-style-type: none"> <li>▪ Site is located near SAC,NHA's areas</li> </ul>
<b>Property and land values</b>	<ul style="list-style-type: none"> <li>▪ House prices are affected by landfill site. Residents feel they are compelled to stay as they are unable to sell their houses.</li> </ul>
<b>Animal Health</b>	<ul style="list-style-type: none"> <li>▪ Impact of landfill site on farm animals. Seagull contaminating grazing land.</li> </ul>

1.13 The issues raised by both the statutory consultees and non-statutory organisations and through the public consultation process have been addressed throughout the EIA and appropriate mitigating measures have been developed as set out in this EIS.



## STRUCTURE OF THE EIS

1.14 The EPA have produced guidance (Environmental Protection Agency, 2002) on the production of EIS's and the information that they should contain, advising that they should be systematically organised to provide sections describing:

- The proposed development
- The existing Environment
- The Impacts of the Proposed Development
- The measures to mitigate Adverse Impacts
- A Non Technical summary

1.15 These guidelines have been followed in the preparation of this EIS, which is structured in what is referred to as a 'Grouped Format', in which each individual environmental aspect associated with the development is considered as a separate section, addressing the existing environment, the relevant aspects of the proposed development, and their impacts, and any mitigation measures proposed to mitigate the potential impacts.

1.16 The EIS therefore is divided into three parts, as follows:

**Part I: Background information**

Provides the background information on the project, including the need for the project, the alternatives considered and policy background.

**Part II: Project Description**

Describes the project, from site development through to the closure and aftercare of the site.

**Part III: Environmental Assessment**

Describes the the existing environment in the area of the site in relation to each separate impact topic and assesses the impact of the proposed development in relation to each separate impact topic and details mitigating measures designed to reduce or eliminate the impacts identified.

**STUDY TEAM AND CONTRIBUTORS TO THE EIS**

1.17 Kirk McClure Morton was engaged as the principal consultant to Donegal County Council for the preparation of the EIS, the provision of specialist technical advice and environmental expertise in conjunction with a number of sub consultants. The Project Team is outlined in Table 1.3.

**Table 1.3 List of sub-consultants & input provided**

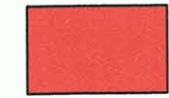
<b>Impact Assessments</b>	<b>Specialist</b>
Air and Climate	Kirk McClure Morton
Flora and Fauna	Bella Terra Environmental Consultants Donegal County Council Veterinary
Geology and Soils	Kirk McClure Morton
Hydrology	Kirk McClure Morton
Hydrogeology	Kirk McClure Morton
Human Beings	Brady Shipman Martin
Noise	FR Mark & Associates
Cultural Heritage	Moore Archaeological & Environmental Services
Landscape and Visual	David Clarke Landscape Architect
Transportation	Kirk McClure Morton
Material Assets	J V Arthur

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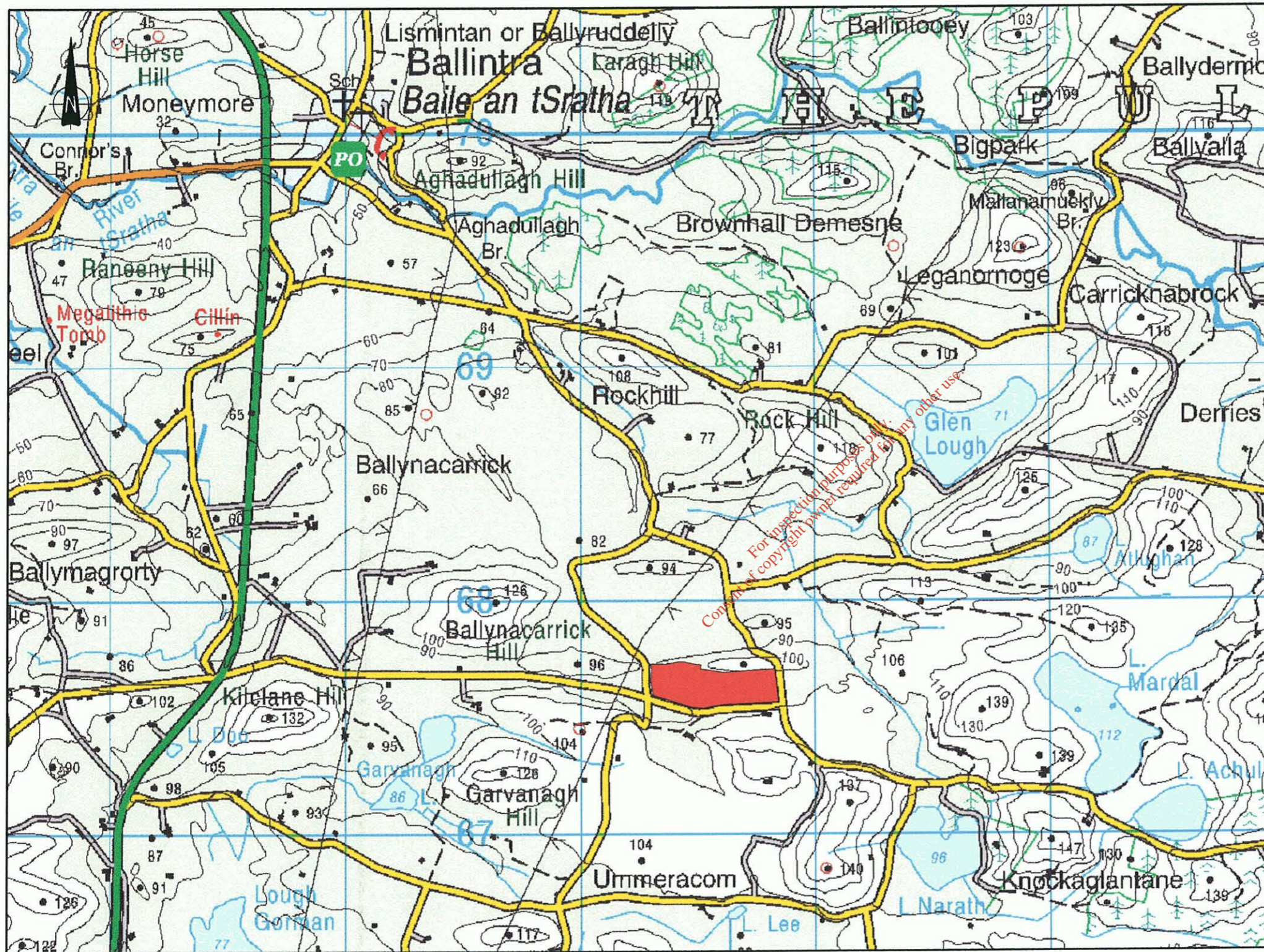
## FIGURES

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KEY



SITE LOCATION



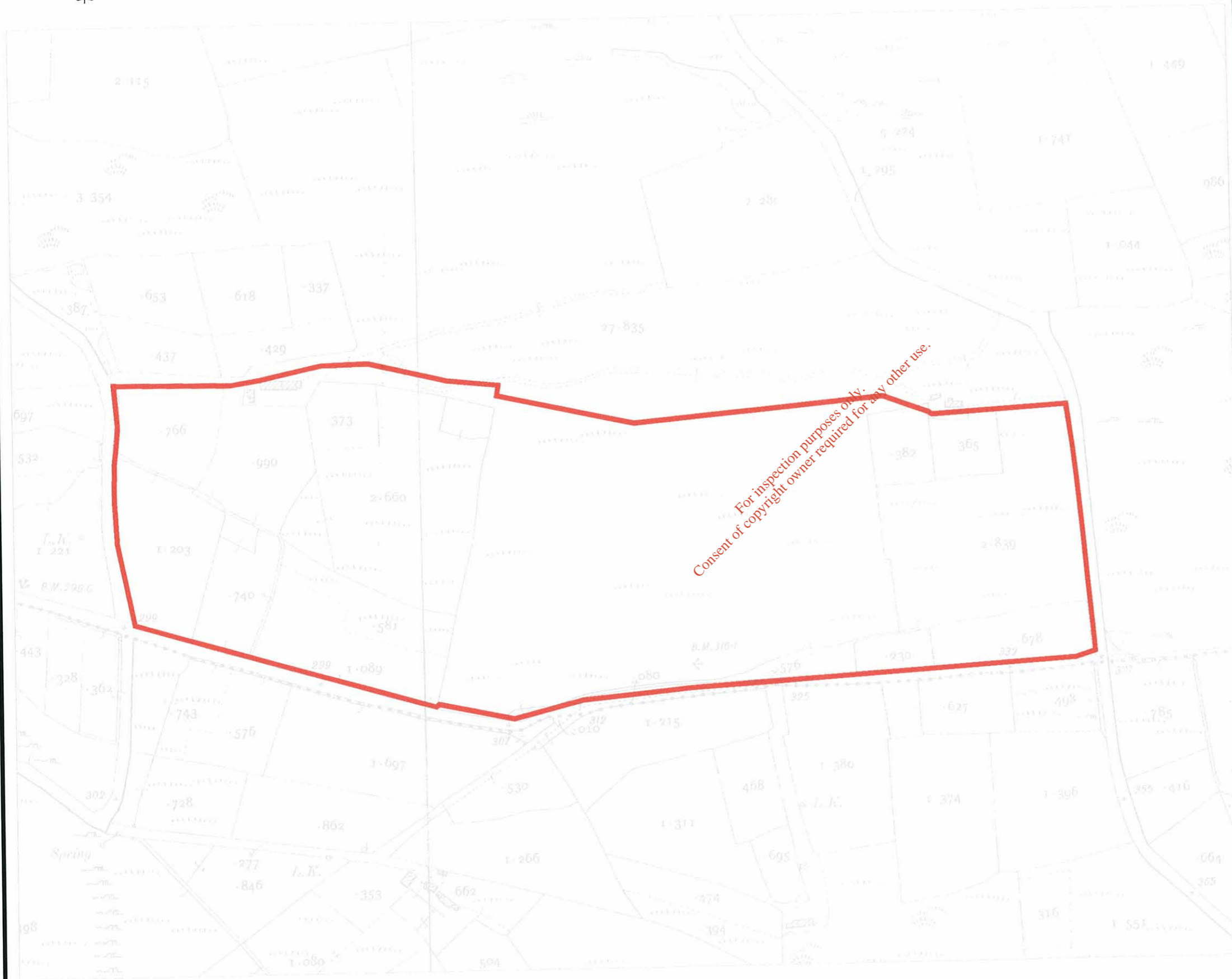
SCALE 1: 20,000



PROJECT  
BALLYNACARRICK LANDFILL PROJECT

TITLE  
SITE LOCATION

FIGURE  
1.1



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KEY  
SITE BOUNDARY

SCALE: 1:2500

 <b>KIRK McCLURE MORTON</b> CONSULTING ENGINEERS	 Comhairle Chontae Dhún na nGall Donegal County Council
--	--

PROJECT  
**BALLYNACARRICK LANDFILL PROJECT**

TITLE  
**SITE PLAN**

FIGURE  
**1.2**

## 2.0 THE WASTE MANAGEMENT POLICY AND PLANNING FRAMEWORK

### INTRODUCTION

2.1 Policy and legislation are key drivers for change to many traditional waste management practices, as a more sustainable approach is sought for the management of the wastes which are produced by society. The emphasis is on changing attitudes and behaviour, so that waste is viewed as a resource, to be managed accordingly, and on providing a high level of environmental protection.

2.2 This section of the EIS therefore provides an overview of the policy and planning framework for waste management which provides the context within which the proposed extension to the landfill at Ballynacarrick has to be considered.

### EUROPEAN UNION WASTE MANAGEMENT POLICY AND LEGISLATION

2.3 Environmental policy, which continues to evolve at an EU level, is designed to provide high levels of protection to human health and the wider environment, and sets out a broad framework for the achievement of these objectives. With respect to waste management, and as set out in the Community Strategy for Waste Management, and elsewhere, policy is founded on five over-arching principles, as follows:

- Self-sufficiency
- The Proximity Principle
- The Polluter Pays Principle
- Best Available Technology Not Entailing Excessive Cost (BATNEEC)
- The Waste Management Hierarchy

2.4 The Waste Management Hierarchy sets out the preferred approach to the management of wastes, with disposal being a necessary, but least preferred option:

- Reduce
- Reuse
- Recycle
- Energy Recovery
- Disposal

2.5 EU waste management policy and legislation is implemented through a number of measures including resolutions, communications, directives and regulations, which in turn impose obligations on Member States to transpose these into national policy and legislation, as appropriate.

- 2.6 The main EU measure that impacts directly on the proposed extension to the landfill at Ballynacarrick is the Council Directive (1999/31/EC) on the Landfill of Waste, otherwise known as the Landfill Directive. The objective of this Directive is to prevent or reduce, as far as possible, the negative effects on the environment from the landfilling of waste. It achieves this by introducing stringent technical requirements for waste and landfills, including:
- Categorization of landfills as inert, non-hazardous or hazardous.
  - Banning certain types of waste from landfills.
  - Standard waste acceptance procedures, which include the treatment of waste before being landfilled.
  - Operating permits, including the provisions for closure and aftercare.
  - Technical standards for the lining and capping of landfills.
- 2.7 These requirements are addressed through the waste management licensing system, under the auspices of the Environmental Protection Agency, as required by the Waste Management (Licensing) Regulations 2000, as amended by the Waste Management (Licensing) (Amendment) Regulations 2002.

#### NATIONAL WASTE MANAGEMENT POLICY

- 2.8 Waste management policy has continued to evolve and be developed not only in response to the obligations imposed by the European Union, but also in response to national, regional and local needs, as well as in the context of Sustainable Development: A Strategy for Ireland, which was published in 1997.
- 2.9 The focus on these policies has been to improve environmental performance, and to encourage a move towards more sustainable waste management practices, with an emphasis on waste reduction, re-use and recycling. A range of measures have been introduced to support these initiatives, including economic instruments, such as the Landfill Levy, and the Levy on Plastic Bags, which have served to raise awareness, and effect change to the economics of waste management.
- 2.10 The principle waste policy initiatives, aimed at promoting the more sustainable management of wastes, and which are considered further below, include:
- **Recycling for Ireland.** Published in 1994, this set out a national strategy for recycling household and commercial waste, setting recycling targets and establishing a number of mechanisms for implementation and review.
  - **Waste Management - Changing Our Ways - A Policy Statement.** Published in 1998, identified an urgent need to modernise waste management practice in Ireland and reinforced the need to move away from landfilling of waste towards the prevention, reduction and recycling of waste.

- **Preventing and Recycling Waste – Delivering Change – A Policy Statement.**  
Published in 2002, this policy statement recognizes that the continued growth in waste production is unsustainable, and addresses the key issues relevant to the achievement of waste re-use and recycling policy objectives.

#### **Recycling for Ireland.**

- 2.11 This Strategy, in addition to setting targets, also recognized the role of landfill, and the need for an integrated approach to waste management, stating that new and upgraded landfill sites should be developed as “Central Waste Management Facilities” to include recycling and civic amenity facilities, as well as waste disposal facilities.

#### **Waste Management - Changing Our Ways**

- 2.12 This Policy Statement reinforced the need to move away from the landfilling of waste, towards prevention, reduction and recycling, seeking to reduce the heavy reliance on landfill, in favour of an integrated approach to waste management which uses a range of approaches to deliver the supporting services and facilities necessary to achieve the recycling and recovery targets. It also set a number of specific targets, to be achieved over the 15-year period, covered by the policy, including:

- A diversion of 50% of overall household waste away from landfill.
- A minimum 65% reduction in biodegradable municipal wastes consigned to landfill.
- Rationalisation of municipal waste landfills, with progressive and sustained reductions in numbers, leading to an integrated network of some 20 or so state-of-the-art facilities incorporating energy recovery and high standards of environmental protection.

- 2.13 The Policy Statement also promotes a “triple-track” approach to waste management consisting of:

- A comprehensive waste recovery programme, aimed in particular at substantially increasing recycling rates for municipal waste and construction and demolition waste.
- Planning for and the provision of supporting recycling and recovery infrastructure.
- Access to adequate, environmentally sound, residual waste disposal capacity.

#### **Preventing and Recycling Waste – Delivering Change**

- 2.14 This most recent Policy Statement is aimed at securing real progress in the coming years on waste prevention, re-use, recycling and recovery, and outlines a range of measures to improve environmental performance, and identifies further issues and actions for consideration. The need for landfill is recognized, but as the option of last resort, after other options have been exhausted, accepting only wastes that cannot be prevented, re-used, recycled, or otherwise treated. To support this, the commitment is given that Government will introduce national bans on the landfilling of specific materials.



### ***The National Development Plan, 2000-2006***

- 2.15 In the policy context, it is also useful to consider the National Development Plan, which provides the basis for continuing economic and social development over the period of 2000 – 2006, setting out a development strategy and investment programme for a range of areas, including infrastructural development. The Plan also commits itself to the promotion of more balanced regional development.
- 2.16 The Plan recognises infrastructural deficits, especially in transport and environmental services, as one of a number of weaknesses that need to be addressed and overcome, if economic and social progress is to be maintained. It also recognises that the better management of solid waste is one of the main environmental challenges, stating: *“Appropriate waste management infrastructure is vital not only for environmental protection reasons, but also for industrial development reasons, for lack of appropriate facilities may hamper development.”*
- 2.17 The National Development Plan also recognises the benefits that can be achieved for the whole of the Ireland through closer economic co-operation. This includes a commitment that authorities North and South will work together to review and co-ordinate activities across a range of environmental areas, and specifically recognises the scope for improved waste management in the cross border context.

### **WASTE MANAGEMENT PLANNING IN DONEGAL**

- 2.18 Waste management planning is a key prerequisite to the provision of improved waste management facilities and services, in terms of both more sustainable practices with increased waste prevention, re-use, recycling and recovery, as well as improved environmental protection. The waste management planning context includes not only the statutory Waste Management Plan, but it will also be informed by a number of other relevant plans and strategies, including:
- Donegal County Development Plan 2000 provides the overall plan, which will lead to sustainable development in the County.
  - The Donegal County Council Waste Management Plan, the primary document and the statutory basis for waste management planning within the county.
  - The North West Region Waste Management Group – Waste Management Plan. Donegal County Council is a member of the Group, which also includes seven district councils in Northern Ireland.
  - The Donegal County Strategy 2002 – 2012.

**Donegal County Development Plan**

- 2.19 Donegal County Council prepared County Development Plan in accordance with Section 20 of the Local Government (Planning and Development) Act, 1963. The Development Plan was adopted by Donegal County Council in 2000 and replaces the previous County Development Plan of 1988. This County Development Plan provides the overall framework, which will lead to sustainable development in the County. Section 2.4 of the Plan included a Policy for Waste Management within the County including the preparation of the Waste Management Plan.

**Donegal County Council Waste Management Plan**

- 2.20 Donegal County Council adopted its Waste Management Plan in 2000, which was prepared in accordance with the requirements of the Waste Management (Planning) Regulations, 1997. This Plan provides the framework for the development of waste management infrastructure and services in the County over the period of the Plan, which is scheduled to be reviewed in 2005, at which time it will be re-assessed and updated, to take into account ongoing developments at a local, regional and national level.
- 2.21 In preparing the Plan, the Council were guided by *Changing our Ways* and sought to give effect to the policy objectives and targets outlined in that statement, so that the Waste Management Plan sets out a long-term vision, coupled with short-term actions, for the infrastructure and services required to manage the wastes arising within the County in a more sustainable manner.
- 2.22 The Waste Management Plan commits to the provision of the necessary infrastructure either on a stand-alone basis or through its participation in the North West Region Cross Border Group Waste Management Strategy, but specifically excluded any thermal treatment options at this time. The 'stand-alone' option would entail the development of facilities necessary to comply with targets wholly within the county of Donegal, while the 'regional' approach to waste management aims to achieve the economics, market presence and increased flexibility associated with having access to greater quantities of waste generated by the larger catchment area. This aspect continues to be developed as the Council continues its co-operation with neighbouring district councils in Northern Ireland.
- 2.23 The Waste Management Plan however deemed it essential that the Council have landfill disposal facilities under its control. The Council therefore committed to providing new landfill sites in the County, to take current and future waste arisings. Recognising the timescales involved, the Council also committed to carrying out a detailed site selection study to identify the most suitable locations for landfill facilities within the county. It was envisaged that the study would seek to identify between 2 and 4 such facilities.

**North West Region Waste Management Group – Waste Management Plan**

- 2.24 Section 2.4 (Policy No 4) of the County Development Plan set out the Council's Plan to explore a regional option in conjunction with Derry City Council, Strabane District Council and Limavady Borough Council. The constituent councils of the North West Region Waste Management Strategy Group has since expanded to the following: Donegal County Council, Ballymoney Borough Council, Coleraine Borough Council, Derry City Council, Limavady Borough Council, Magherafelt District Council, Moyle District Council, Strabane District Council.
- 2.25 This Group prepared a waste management plan for strategic waste planning purposes, which was adopted by the Northern Ireland district councils by the end of 2002, in fulfilment of their statutory obligations. The Plan is also intended to complement the Waste Management Plan of Donegal County Council.
- 2.26 The Plan identifies a series of actions and initiatives, which include the following:
- Waste minimisation activities including education and raising awareness at a local level and support of central government initiatives.
  - Home composting.
  - An enhanced waste collection service that will engage kerbside collection methods for both mixed dry recyclables and compostables.
  - Encouraging the reuse of materials
  - Processing of collected mixed dry recyclables and materials recovery facilities
  - Centralised composting
  - Provision of new and enhanced civic amenity and bring sites
- 2.27 The Plan however recognises the limited landfill capacity in the North-West region, and the need for the provision of new landfill sites for the final disposal of residual wastes following upstream minimisation, reduction, recycling and recovery activities. This Plan therefore commits to undertaking a site selection study to identify potential future landfill sites, but also recognises that the movement of waste to or from Donegal for disposal would not be in accordance with current legislative provisions under the UK Management Plan for Exports and Imports of Waste.
- 2.28 The Donegal County Council Waste Management Plan and the North West Region Waste Management Plan both have similar objectives and have adopted similar approaches to the management of waste, including the need to develop future landfill disposal capacity. Both plans also specifically recognise the need for cross border co-operation and include such co-operation as an objective.

**Donegal County Strategy 2002 – 2012**

- 2.29 The Donegal County Strategy 2002 – 2012 has been prepared by the Donegal County Development Board, in accordance with the principles set out by the Inter-Departmental Task Force, and seeks to promote and co-ordinate economic, social and cultural development in the County.
- 2.30 The Strategy recognises the significant resource that is provided by the natural environment of the County, and sets a number of goals and related objectives for the environment sector, which includes:
- **Goal D:** To reduce, minimise and manage all waste production for final safe disposal.
  - **Objective D2:** To work towards the implementation of the Donegal County Council Waste Management Plan.

**CONCLUSIONS**

- 2.31 The ongoing need for landfill is recognised by national policy, as an integral component of the waste management infrastructure necessary to manage wastes in a more sustainable manner, albeit as the least preferred option, with the quantities of waste landfilled reducing over time, as other policy initiatives promoting re-use, recycling and reduction, are implemented.
- 2.32 The proposal to develop landfill capacity within the County also forms a key element of the Donegal County Council Waste Management Plan, and the implementation of this Plan is supported by the Donegal County Strategy.

### 3.0 THE CASE OF NEED

#### INTRODUCTION

- 3.1 Waste management, as an issue, and the development of facilities in particular, are increasingly the subject of scrutiny, as stakeholders drawn from many sectors including the public, community groups, businesses, elected members, farmers, and interest groups, seek to ensure that appropriate protection is afforded to human health and the environment, whilst ensuring that the necessary facilities are available to meet the needs of the community.
- 3.2 A key question that needs to be addressed therefore, as part of the decision-making process, is whether there is a need for a particular facility. This section of the EIS therefore seeks to answer that question with regard to the proposed extension to the landfill at Ballynacarrick

#### CURRENT LANDFILL CAPACITY

- 3.3 The Waste Management Plan estimated that in 2000, based on the then current disposal rate of 38,000 tonnes per annum, the capacity remaining at the four landfills operational in Donegal, was approximately 136,000 tonnes, which equated to 3.2 years capacity. Since that time, two of the four sites have closed, with Ballynacarrick and Balbane remaining as the only licensed operational landfills within the County accepting municipal wastes.
- 3.4 The landfill at Balbane is scheduled for closure in the near future, as it nears capacity. The current Waste Management Licence for Ballynacarrick (EPA License No. 24-1) allows for the disposal of 24,000 tonnes per annum, which at that rate of input equates to a life of two years.
- 3.5 It is evident therefore that the remaining licensed waste disposal capacity within the County is extremely limited, and there is an urgent need to develop new landfill capacity, in accordance with all the necessary technical and operation standards.

#### THE PROVISION OF FUTURE LANDFILL CAPACITY

- 3.6 The Waste Management Plan, as noted previously in Section 2, underpins the need to develop additional landfill capacity within the County. Specifically, the Plan set out that the Council would develop landfill disposal facilities under its control within the County, to meet the needs to provide secure disposal capacity.
- 3.7 In providing the new landfill capacity, the Council committed to carrying out a detailed site selection study to identify the most suitable locations for landfill facilities within the county. It was envisaged that the study would seek to identify between 2 and 4 such facilities.

3.8 Donegal County Council have undertaken the Site Selection Study, which is summarised in Section 4, in accordance with the provisions set out in the Waste Management Plan. This Study has identified two sites for future development, which are:

- Extension to the existing licensed Landfill at Ballynacarrick; and
- Development of a new Landfill at Meenaboll.

3.9 This Study has been presented to Donegal County Council, at their General Purposes Committee meeting on 11<sup>th</sup> February 2002, and the proposal to develop landfill capacity at Meenaboll and Ballynacarrick was adopted at a meeting of Council on 25<sup>th</sup> March 2002. Relevant sections of the minutes for these meetings and the presentation given at the general purposes committee meeting are included in Appendix C. These proposals therefore meet the needs identified by the Waste Management Plan, and the development of these sites is integral to the implementation of the Plan.

#### CONCLUSIONS

3.10 The urgent need to develop new secure landfill disposal capacity within the County has been established, in accordance with the need identified within the Waste Management Plan, and the very limited capacity remaining at the two currently operational sites licensed to accept municipal wastes.

3.11 The proposal to develop an extension to the existing landfill at Ballynacarrick has been confirmed by the Site Selection Study undertaken by Donegal County Council, which identified two sites for new landfill capacity, the other being Meenaboll. These proposals have been accepted by the Council and the preparation of this EIS forms part of the process to develop the extension at Ballynacarrick.

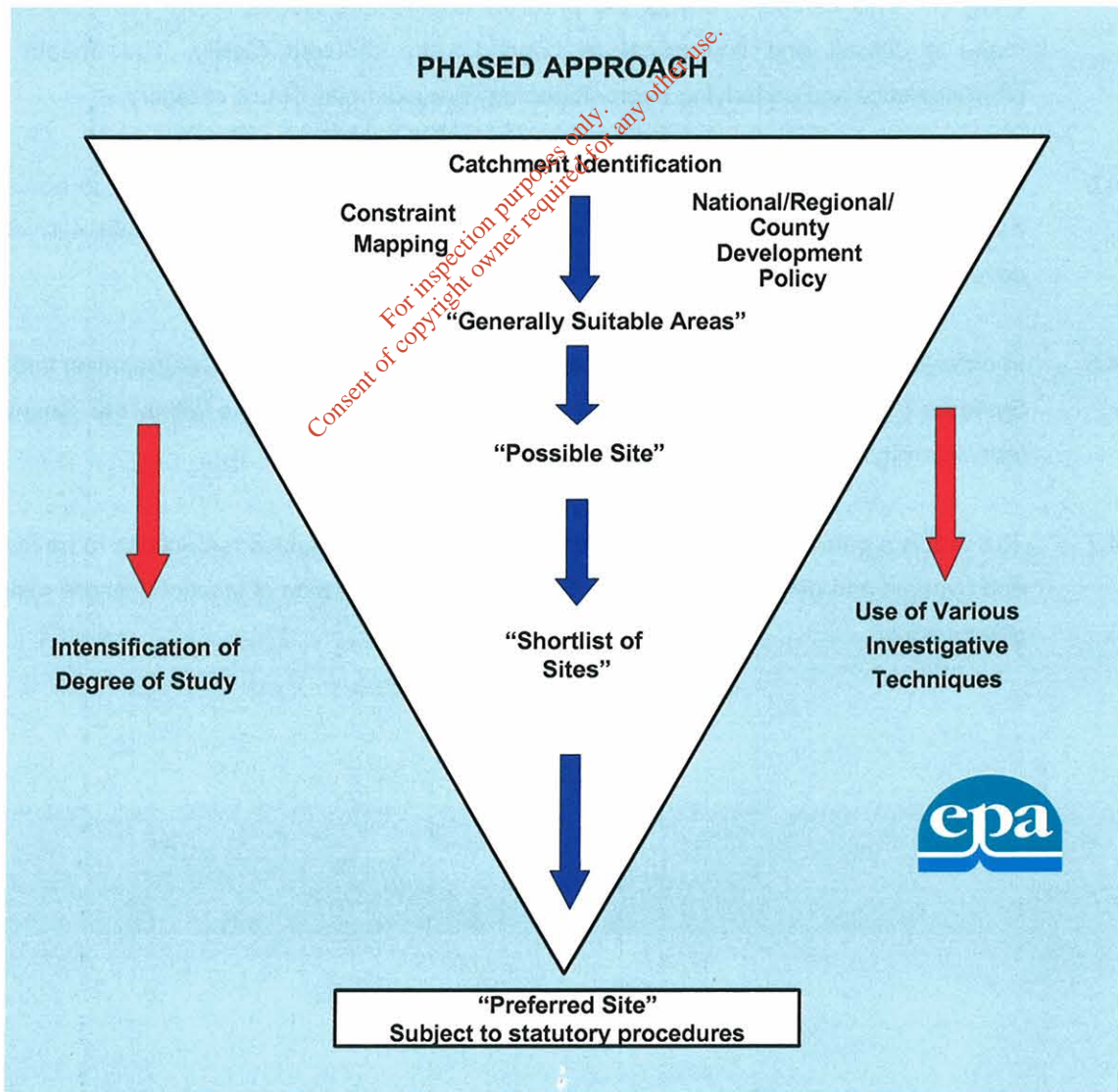
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#### 4.0 ASSESSMENT OF ALTERNATIVES

##### INTRODUCTION

4.1 The process of site selection of new landfills must begin by establishing criteria to be used in the selection process. The EPA has produced Draft Site Selection guidelines for the site selection process including the process and criteria to be used. These Guidelines are the basis for the approach that has been undertaken by Donegal County Council. The Guidelines set out a decision making pathway, the first stage of which is the formation of a constraint study. A Constraint Study effectively sets out to establish areas of the County where the development of a landfill is less likely to occur than others. It does not exclude any such areas but establishes a series of preferences. A diagrammatic version of this process based on the EPA guidelines for landfill site selection is shown in Figure 4.1.

Figure 4.1 EPA Guidelines for Landfill Site Selection



## CONSTRAINTS

- 4.2 There are many factors that act as constraints on the decision making in landfill site selection, these can be broadly divided into two main categories;
- Societal Issues
  - Physical and Environmental Issues
- 4.3 The first can be associated with the decisions we make as a society in which we seek to develop a lifestyle that is both sustainable and sustaining to us as individual members of that society. An example of such a category is the designation of certain areas as National Heritage Areas (NHA) or Special Areas of Conservation (SAC). We as a society have decided through our political structures that such areas are worthy of preservation in their current state for future generations.
- 4.4 The second relates more directly to the physical world and environment we find ourselves living in. This category reflects the practical engineering issues where particular locations make it difficult and impractical to construct the required facility. The impact of soil characteristics and underlying bedrock geology are examples of this category.
- 4.5 The issues considered in the development of the constraint study carried out to arrive at the decision to select potential sites for further development are given in Table 4.1. The list covers both desirable and non-desirable aspects of any given site.
- 4.6 In order to consider these constraint factors in an effective manner a Geographical Information Systems (GIS) was used to determine the most suitable locations within the County for a landfill facility.
- 4.7 The GIS is a particularly useful tool for this task because it enables restrictions to be mapped and overlaid and can therefore greatly assist in the identification of locations where restrictions should apply.



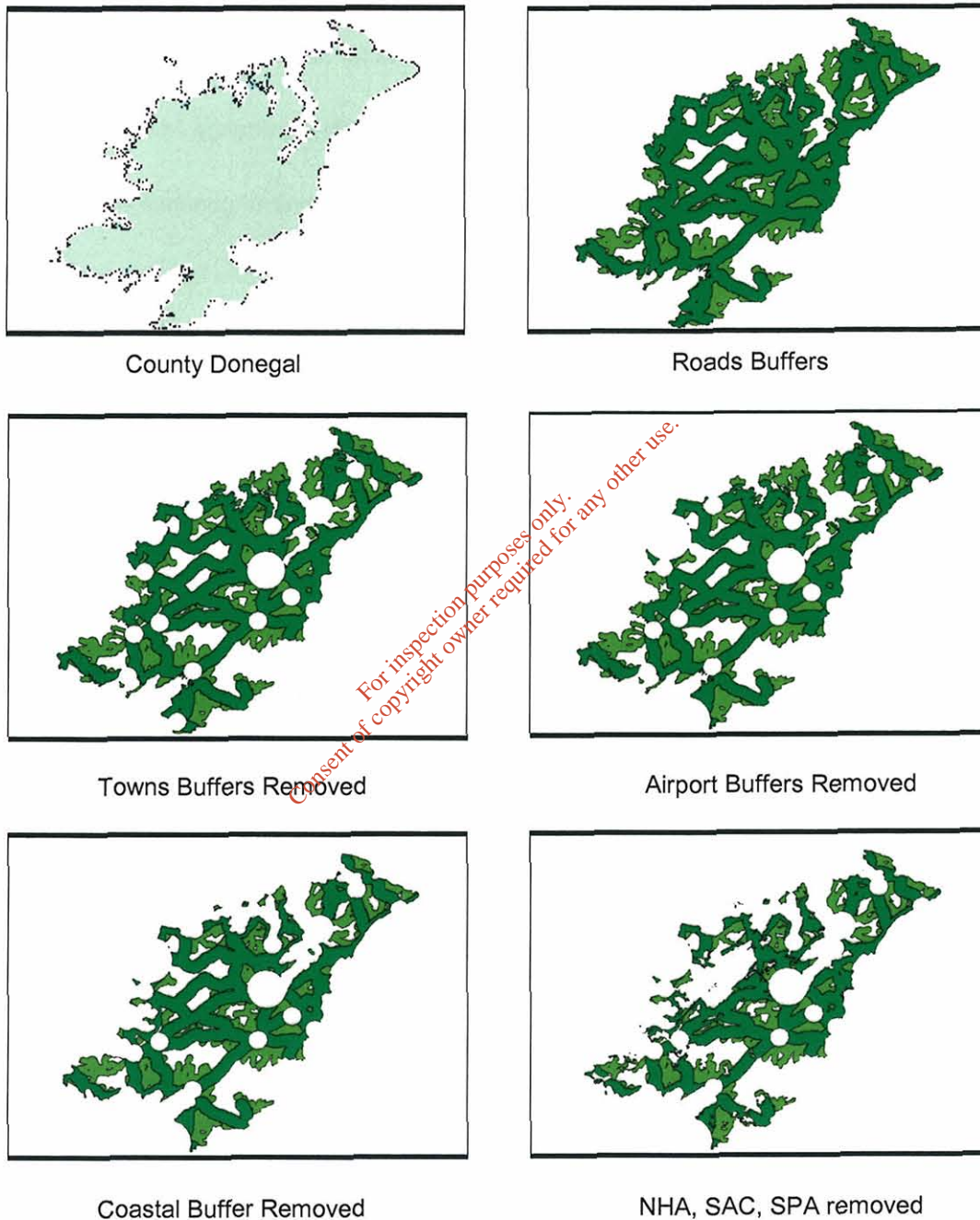
**Table 4.1 Issues Considered in Development of the Constraint Study**

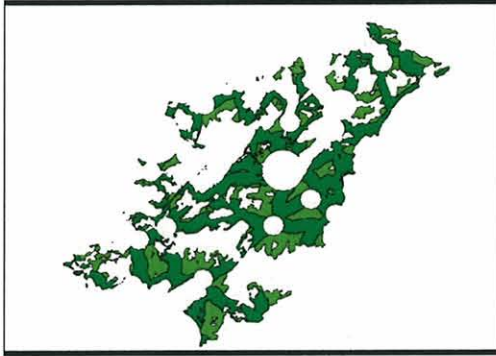
<b>Constraint</b>	<b>Impact on Selection Process</b>
NHA /SAC	Areas designated as of particular environmental importance and considered generally unsuitable for landfill development.
Category 1 County development plan Category 2 County development plan Category 3 County development plan	The County development plan designated areas of the County in order of scenic importance. Category 1 allows for normal development under the Planning Act: Category 2 is of scenic importance and places restrictions on developments: Category 3 is of high scenic importance and places significant restrictions on developments: The most desirable location for a landfill therefore is in a Category 1 area.
Proximity to developments	The County development Plan designated towns in the County as first and second tier towns. Areas adjacent to these towns were considered as inappropriate for landfill development.
Water catchments	It was considered undesirable to site a landfill in a surface water catchment used as a source of drinking water.
Aquifers	It was considered undesirable to site a landfill in a ground water catchment used as a source of drinking water.
Soils/Geology	Site must have suitable soil characteristics and underlying bedrock geology.
Airports	The aviation authorities place restrictions on landfill developments in defined zones around airports due to the potential of increased rates of bird strike on aircraft.
Monuments/Sacred sites	As a society we have decided that archaeological and sacred sites must be respected and preserved where possible.
Designated Amenities	Areas of the County previously designated as an amenity such as Bealach na Gaeltachta.
Protected species of Flora/Fauna	As a society we have decide that endangered species of Flora and Fauna must be protected.
Coastal Areas	The coast of Donegal was considered an undesirable site for a landfill.
Roads	Proximity to the road network is an essential feature of a suitable site in order that waste can be transported to the facility.
Electricity	Modern landfills include a high level of engineered services which require an electrical power supply.

4.8 Figure 4.2 provides the results from the GIS analysis in a pictorial sequence where areas of the County are shown to be both desirable in terms of proximity to the road network and then undesirable in terms of a range of the factors listed in Table 4.1.

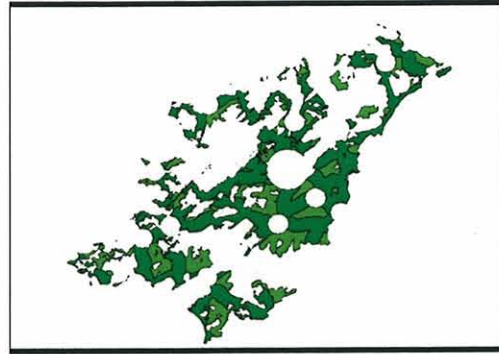
4.9 Figure 4.2 reflects the EPA approach given in Figure 4.1 starting at the catchment identification stage shown in the first image, which identifies the entire County of Donegal as the catchment involved in this exercise. The sequence then shows the suitable areas of the County shrinking as each criteria is applied.

**Figure 4.2 County Landfill Site Selection Process**





Category 3 Removed



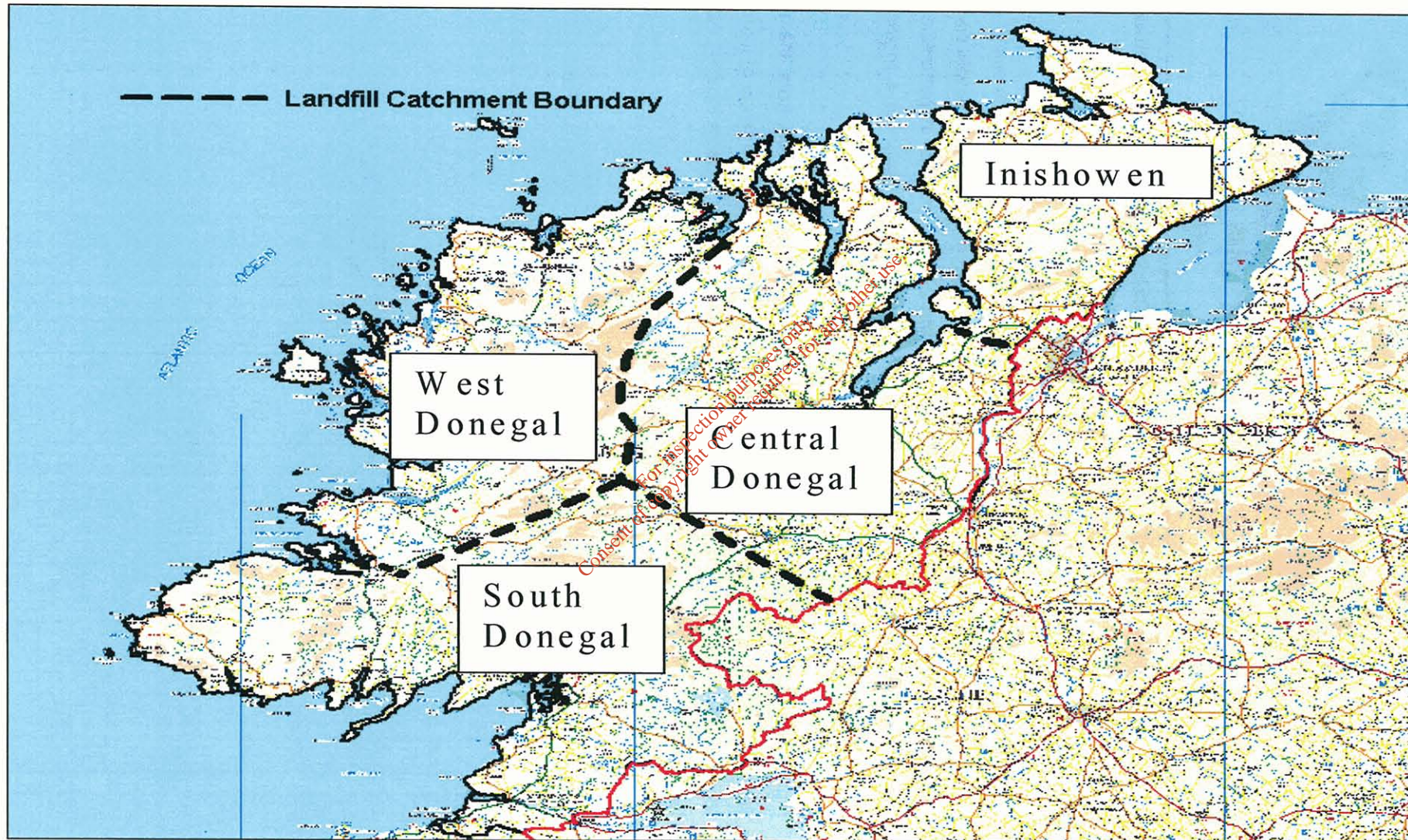
Water Catchments & Aquifers Removed

### REGIONALISATION

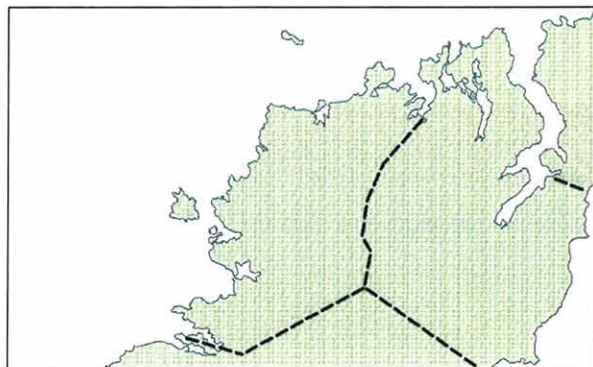
- 4.10 The Donegal Waste Management Plan envisaged that a site selection study would seek to identify between 2 and 4 landfill facilities for the county as opposed to 1 large landfill commonly referred to as a 'superdump'. An investigation into the County in relation to patterns of waste generation and collection suggested that the County could be divided into 4 regions each potentially served by a small regional landfill.
- 4.11 Figure 4.3 illustrates the regional approach, however it can be seen from the pictorial sequence in Figure 4.4 that the Western region of the County possess a range of undesirable factors from the list given in Table 4.1 to such an extent that no suitable location has been found.

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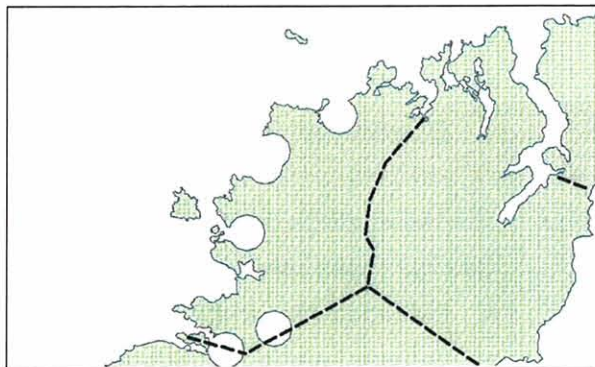
Figure 4.3 Regions to be Served by Regional Landfill Sites



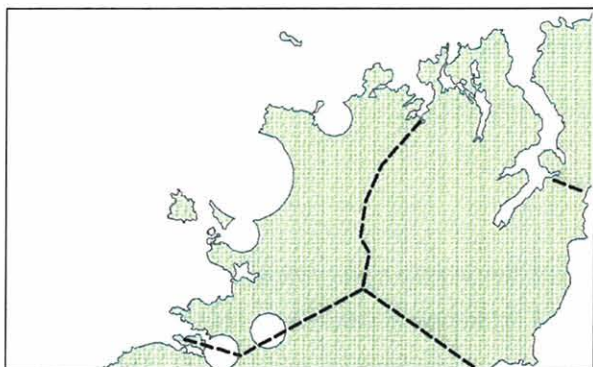
**Figure 4.4 Site Selection in West Donegal**



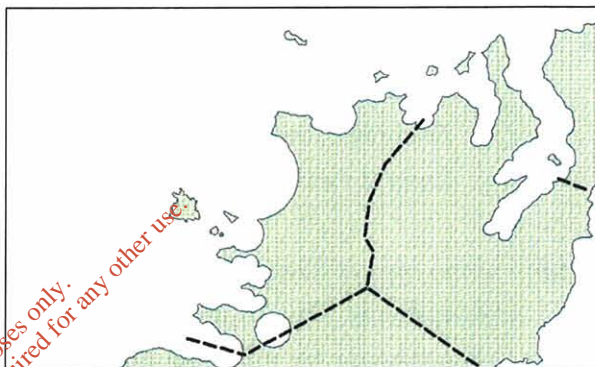
Western Catchment Area



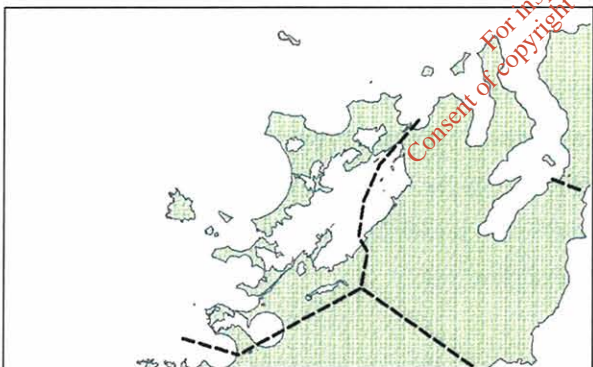
Town Buffers Removed



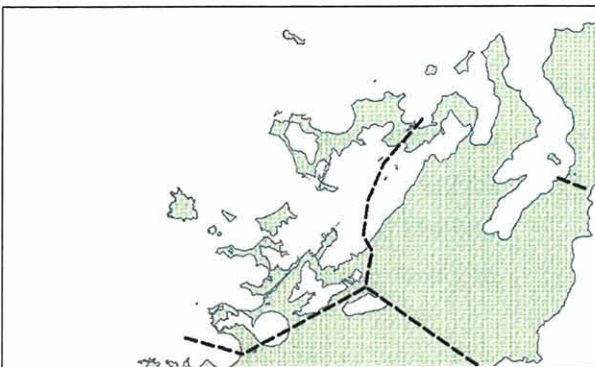
Airport Buffer Removed



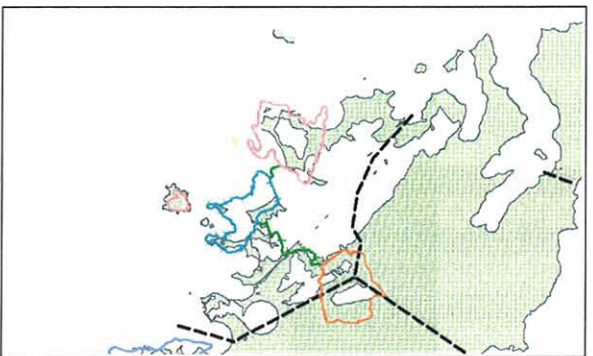
Coastal Buffer Removed



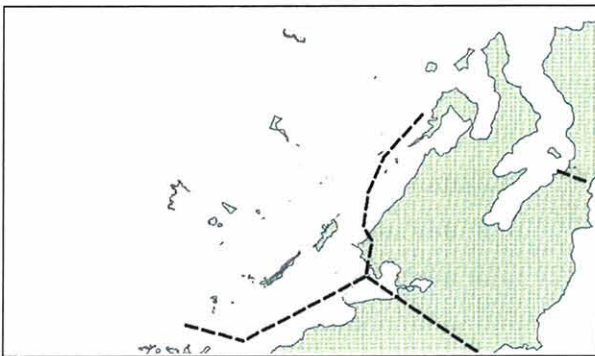
NHA, SAC, SPA removed



Landscape Category 3 Removed



Bealach na Gaeltachta



Landscape Category 2 Removed

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- 4.12 Each waste catchment of the County was examined for possible sites which met the selection criteria. In the case of the South Donegal a number of possible sites were examined. They were divided into two main categories:
- Extensions to existing sites
  - Development of a Greenfield Site
- 4.13 The two existing operational landfill sites within County Donegal are located in the south of the County. These sites are:
- Ballynacarrick Landfill Site, Ballintra
  - Balbane Landfill Site, Killybegs
- Hence the potential for extending an existing site formed the first category.
- 4.14 The second category considered was a Greenfield site within the south Donegal catchment. Two Greenfield sites were considered:
- Shannagh, between Laghy and Ballintra
  - Land at Pettigoe
- 4.15 In the case of Balbane the site is in an open sloping landscape and road access is narrow with many bends. Access from the Killybegs direction is across a causeway built as part of the impoundment for the local water supply. The impounded lake is adjacent to, and clearly visible from, the site. Only limited infrastructural development has been undertaken at the site as it is nearing capacity and is due for closure.
- 4.16 In the case of Ballynacarrick, the site has a current Waste Licence with the most recent cell constructed using an engineered containment system. There has been significant investment on the site already in the form of leachate capture systems, office, wheelwash, weighbridges and site access roads. All of these facilities, which can be utilised in any proposed extension of this site, make this the preferred site over the Balbane site.
- 4.17 A number of Greenfield sites were also considered notably at Shannagh and in forested locations in the Pettigo area. These sites have potential for future development however they would also require the development of support infrastructure.
- 4.18 An extension to an existing landfill was a preferred option due to the infrastructural investment, existing landuse, availability of land, the historical information prepared for the waste licence application and the fact that a waste licence was issued for the site. Therefore on this basis an extension to Ballynacarrick Landfill Site was chosen as the preferred option for a landfill in South Donegal.

- 4.19 The Ballynacarrick Landfill Site was confirmed as the Council's candidate site in the south of the county in February 2002 when the elected members of the Council resolved that the Ballynacarrick site should be subject of an Environmental Impact Assessment.
- 4.20 A map showing potential Greenfield and the existing sites is shown in Figure 4.5.

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## FIGURES

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KEY



LOCATION OF SITES



SCALE 1: 250,000



PROJECT

BALLYNACARRICK LANDFILL PROJECT

TITLE

POTENTIAL GREENFIELD AND EXISTING SITES LOCATIONS

FIGURE

4.5