



PROPOSED BIOMASS FUELLED POWER PLANT

**LAND OFF BALLYVANNON ROAD, NEAR GLENAVY
COUNTY ANTRIM**

PLANNING STATEMENT

OUR REF: 05/2332/C/W

MAY 2008

The Graham Bolton Planning Partnership Ltd, is a Town Planning and Environmental Consultancy based in Manchester, England, established in 1986. The Practice primarily handles commercial projects including hospital and mental health developments, waste recovery and handling proposals, industrial and residential schemes. The Practice has expertise in projects which require separate Licensing or Permitting under Environmental Legislation and specialises in dealing with development proposals where both planning and environmental licensing is required.

The Practice includes amongst its specialisms projects involving the handling and treatment of agricultural wastes including animal by-products, and acts for a large proportion of the UK's rendering industry, a number of abattoirs and other businesses involved in animal by-products. Developments involving the handling, treatment and disposal of other waste streams are also an area of work covered by the Practice.

The following personnel have contributed to the preparation of the Environmental Statement, select Supporting Documents and Planning Statement:

Graham Bolton	BA (Hons) MRTPI
Fiona Child	MCD MRTPI
Susan Bolton	BA (Hons) MRTPI
Barbara Brownridge	BA (Hons) DipTP MRTPI
Dean Hutchings	BA (Hons)

Onward Buildings
207 Deansgate
Manchester
M3 3NW

Tel: 0161 833 1616
Fax: 0161 833 1414

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EXECUTIVE SUMMARY

1. Rose Energy Limited are proposing to build a biomass fuelled power plant on a site off Ballyvannon Road, near Glenavy, adjacent to the rendering plant of Ulster Farm By-Products.
2. The proposal is for a 100MWe thermal input, 30MWe electrical output power plant using poultry bedding and meat and bone meal (MBM) as the fuels. Approximately 25MWe of electrical output will be exportable to the NIE grid. Approximately 220,000 tonnes of poultry bedding and 40,000 tonnes of MBM will be used, the adjacent Ulster Farm Rendering Plant being the primary source of the MBM which is currently exported to England, Scotland and Wales for use as a fuel in power plants and cement kilns.
3. There is an urgent requirement to deal with the problem of poultry litter. Along with other manures from intensive livestock rearing, excessive nutrients are being applied to the land which is causing water quality problems, engendering degradation of bio-diversity in water bodies and has a distinct adverse visual impact in the form of algae blooms. Lough Neagh is hyper-eutrophied and water bodies and resources which are presently satisfactory are at risk of eutrophication and degradation. There is insufficient nutrient deficient land in Northern Ireland to continue past practices and accommodate all the livestock manures. Furthermore, it is identified that phosphorus is the main nutrient which is in particular excess.
4. The Nitrates Directive requires action to reduce the excessive application of nutrients, which includes a closed period for application over winter and consequent storage of manures during that period. An EC agreed arrangement presently allows for over winter field storage of poultry litter but that arrangement comes to an end in December 2008. Without a full solution to the problem of excessive manures and nutrients, the intensive poultry industry in Northern Ireland, which contributes £400m to the NI economy each year, is at severe risk. The poultry industry employs

approximately 6000 people with a further 2500 people employed by others who are dependent on the poultry industry.

5. Three independent reports, one commissioned by poultry producers with the assistance of NI Invest, another commissioned by the Environment and Heritage Service from the Scottish and Northern Ireland Forum for Environmental Research (SNIFFER) and the Expert Group for Alternative Uses of Manures (EGAUM) set up by the Minister for Agriculture and supported by an extensive research report by the Global Research Unit, have all recommended that a single poultry litter fired generating plant is the solution to the problem of poultry litter in Northern Ireland.
6. A poultry and MBM fuelled power plant would also accord with the need for more electricity generation from renewable sources and, in particular, for renewable energy other than wind derived energy. Northern Ireland is committed to requiring that at least 12% of its electricity comes from indigenous renewable sources by 2012 – the proposed development would meet up to 40% of the requirement to be derived from non-wind derived energy.
7. A review of potential sites has been undertaken. The chosen site at Glenavy is:
 - of the right size, 5 hectares;
 - is located where a large supply of water can be obtained which is necessary for cooling purposes;
 - is removed from the main centres of poultry production which is necessary in the interests of bio-security;
 - is immediately adjacent to the single largest fuel source at Ulster Farm; and
 - is available, providing certainty that the project can be delivered if planning permission is granted.
8. The planning application has been the subject of an Environmental Impact Assessment with substantial reviews of the potential environmental impacts of the development. The EIA exercise has demonstrated that no unacceptable harm would

be created by the proposed development. In respect of aquatic ecology, though no harm has been identified it has revealed gaps in knowledge which require further work which is being undertaken. No harm arising from air quality, human health, noise, or other matters has been identified or which cannot be mitigated for, with the exception of landscape and visual impact.

9. A Traffic Assessment has been undertaken which has identified the existing traffic and road capacity and the traffic estimated to arise from the proposed development. The power plant will generate half the level of traffic generated by Ulster Farm (142 two-way movements against 299 existing to and from Ulster Farm) onto a road network which is lightly trafficked. In the peak hour the increase will be just 14 two-way movements and well within the *Transport Assessment Guidelines for Development Proposals for Northern Ireland October 2006* which refers to 100 movements before a full Transport Assessment is required. All deliveries and collections will be between 7am and 7pm, Monday to Friday and up to 1 pm on a Saturday only.
10. The proposed power plant is a prescribed activity which will need to be permitted under the Integrated Pollution Prevention and Control regime. In securing an IPPC permit it will be necessary to demonstrate that the plant employs Best Available Techniques and its operation will not result in emissions to air, water, groundwater or land which may be harmful, or to minimise emissions where this is not possible.
11. The site lies within the designated green belt and within but on the periphery of an Area of High Scenic Value (AHSV). The property which is the site of the proposed power plant became available late on in the process and is preferred to the originally identified site which lies immediately adjoining but which is outside of the AHSV. It is considered that the application site is better in landscape and visual impact terms than the site which was originally identified but which lies outside of the designated area.

12. The restraint policies for development within rural areas, the green belt and Areas of High Scenic Value need to be considered in the context of the protection of a major industry and part of the agricultural economy of Northern Ireland and the substantial jobs that it supplies and the need to find an appropriate solution to the problem of the disposal of poultry bedding other than to land. Policy guidance in PPS 4 (Industry) acknowledges that some new major industrial projects may require sites outside settlements because of their size or specific site requirements. Draft PPS 18 (Renewable Energy) recognises the benefit of using agriculturally derived biomass such as poultry litter as a fuel and expects proposals to be located at or as close as possible to the energy resource.

13. A total 45 sites were initially identified and reviewed but the site at Glenavy has significant benefits which outweigh other considerations. The landscape and visual impact can be mitigated to a degree but it will still have an impact. Some views are restricted from a number of viewpoints by the existing topography, trees and hedgerows. Wherever a power plant is located it involves substantial buildings (in this case up to 42m in height) and a chimney (80m) and will be conspicuous. The location at Glenavy and the positioning on this specific site allows the proposed development to be set down into the existing landscape but it will remain conspicuous from some view points.

14. This is a project of national significance. It is fully supported by DARD's renewable energy strategy for the agricultural sector as an appropriate means of dealing with the poultry bedding issue and by the renewable energy policies of DETI and the Strategy for Energy. It will achieve significant reductions in CO₂ emissions both by combusting the poultry bedding as a fuel, rather than spreading it, and also by fossil fuel substitution. It is an indigenous source of fuel and thus is particularly to be preferred in the situation of power generation in Northern Ireland which has been reliant upon imported fuels. It is the optimum solution in terms of dealing with this "waste" stream and is a sustainable approach to the issue and the form of development.

15. The impact upon the landscape and visual impact and the policies which seek to protect the landscape (including those in the draft Belfast Metropolitan Area Plan) need to be considered against the national importance of the scheme and the need for the development and the absence of a readily available and identifiable site which meets the requirements for the designed power generating plant. It is considered that the residual impact upon the countryside and visual amenity is outweighed by these other considerations and that planning permission should be granted.

1. INTRODUCTION

1.1 This Planning Statement has been prepared by The Graham Bolton Planning Partnership Limited in support of a planning application by Rose Energy Limited to develop a biomass fuelled power plant on a site off Ballyvannon Road, near Glenavy, Co. Antrim. The details of the proposal are given in the section Planning Proposals.

1.2 At an estimated cost of over £100m it is proposed to develop a 100 Megawatt (Mw) thermal input, 30 Mw electrical output power plant, primarily using poultry bedding as a fuel, supplemented with meat and bone meal (MBM). A full description of the proposed development is provided later in this document.

1.3 The planning application is an Environmental Impact Assessment (EIA) application under The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 1999, as amended. The proposed development is an industrial installation for the production of electricity and falls under Schedule 2 of the EIA Regulations. It is considered that in view of the characteristics of the development, its location and potential impact, it is accepted that an Environmental Impact Assessment (EIA) is required to adequately environmentally assess the proposed development.

1.4 Accompanying the application is an Environmental Statement (ES) which includes a suite of supporting reports which also form part of the ES covering the following issues:

- Transport
- Landscape and Visual Impact Assessment
- Flood Risk and Drainage
- Air Quality
- Health Impact Assessment and Human Health Risk Assessment
- Other Emissions

- effluent and water
- noise
- odour
- dust
- lighting
- ash disposal
- Archaeology
- Ecological Impact

These reports have been prepared by various consultants. Details are given in the Introduction to the ES.

- 1.5 A Design and Access Statement, prepared RPS, accompanies this Planning Statement and EIA application. A Landscape Management Plan in support of the Landscape Planting Plan for the proposed development site also forms part of the planning application.

Who are Rose Energy?

- 1.6 Rose Energy Limited is a joint venture Company which has been set up by three of the leading agri-businesses of Northern Ireland. Moy Park Limited and O’Kane Poultry Limited are the two leading poultry product producers in Northern Ireland, employing some 6000 people directly and 2,500 indirectly and contributing over £400m per annum (at 2006 figures) to the Northern Ireland economy. Glenfarm Holdings Limited is a farmer owned cooperative which treats animal by-products and food waste. The three Companies have come together to develop a solution for the disposal and use of the agricultural by-products of poultry bedding and meat and bone meal.
- 1.7 As part of the preparation for this application discussions have been held with officers of The Planning Service, Environment and Heritage Service and others; details are included in the separate Consultation Statement.

Other Regulatory Controls

- 1.8 The proposed development is prescribed for control under the Pollution Prevention and Control (Northern Ireland) Regulations 2003 which implements the Integrated Pollution Prevention and Control (IPPC) Directive introduced Europe-wide as a system of regulation for certain industrial processes which by the nature of the process and their operation may result in emissions which are potentially harmful to the environment. The requirement of the PPC Regulations is to prevent, or where not possible, to minimise those emissions. The Environment and Heritage Service is the regulator for permitting and control under the PPC Regulations. An application for a Permit to operate the prescribed process of electricity generation on this scale will be submitted in due course. The PPC Regulations require that processes achieve Best Available Technique (BAT) to prevent or minimise pollution – the BAT standards are defined in European and UK Guidance.
- 1.9 The proposed development is also covered under the European Union Waste Incineration Directive (WID). This sets limits for permitted emissions to the atmosphere and specifies the requirements for controlling feedstocks, combustion and residues.
- 1.10 A licence to operate an electricity generation plant and supply electricity is also required under the Electricity (Northern Ireland) Order, 1992, as amended.
- 1.11 Under the Electricity Consent (Planning) Northern Ireland Order, 2006, there are provisions to bring together the granting of planning permission on an application for electricity consent under the Electricity Order 1992. The Order is intended to streamline procedures so that consent can be obtained from one Department (The Department of Enterprise, Trade and Investment) for consent to construct an electricity generating station and for the necessary planning permission. The Order, which was made on 14 November, 2006, has not been brought into operation (“commencement”) and the current position is that planning permission

must be applied for separately from the application for a licence to operate an electricity generation plant and supply electricity.

2. DESCRIPTION OF THE DEVELOPMENT

Location

2.1 It is proposed to develop a biomass fuelled power plant on a 5 hectare (12.37 acres) area of land off Ballyvannon Road, 2km to the south west of Glenavy, Co Antrim. The site lies immediately to the west of the property of Glenfarm Holdings Limited and the rendering plant of their wholly owned subsidiary, Ulster Farm By-Products Limited. The location of the proposed development is illustrated in the plan below (Figure 1).

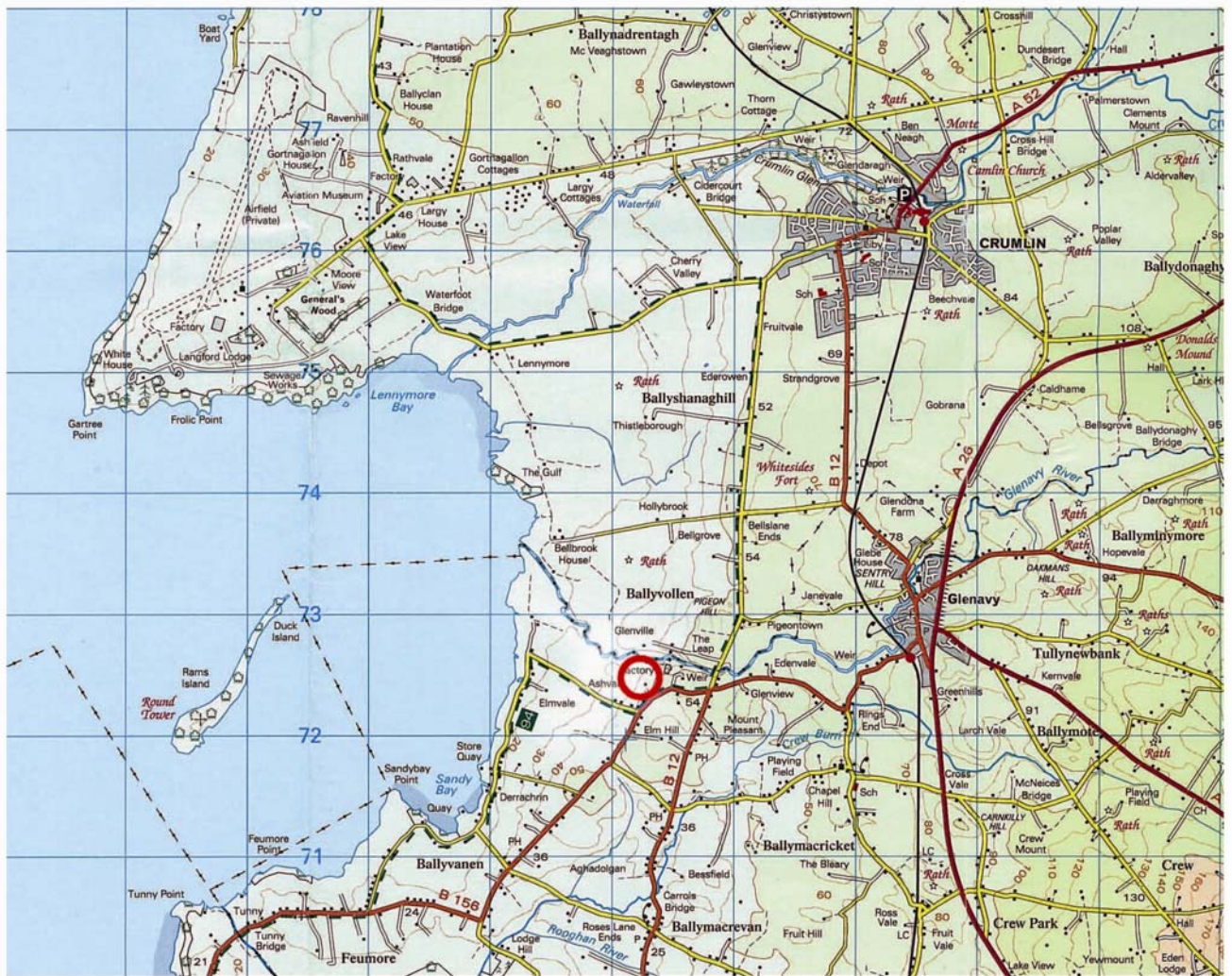


Figure 1: Location

Northern Ireland Licence No: 2453

- 2.2 The site's location is largely rural but the area contains nearby groups of residential properties and the significant presence of the adjacent rendering plant. Approximately 1km to the west is Sandy Bay of Lough Neagh. Lough Neagh is a designated Area of Special Scientific Interest, a Special Protection Area (SPA) and Natura 2000 network site under the European Birds Directive, and a RAMSAR site of International Wetland Importance.
- 2.3 The site, which is a small holding of agricultural land with a dwelling and outbuildings, is "greenfield" and last used for grazing, and lies immediately south of the Glenavy River which flows north westwards into the Lough. The Glenavy River at this point, below the waterfall known as Leaps Bridge which lies to the east of the adjacent rendering plant, is incised with significant woodland within the immediate environs of the river itself along its banks.
- 2.4 The area of land between the proposed site and Lough is a pattern of open fields divided by hedgerows, including extensive hedgerow trees. The land is used for grazing purposes.
- 2.5 To the south west of the site are further fields and properties clustered along the southern end of Ingram Road towards its junction with Ballyvannon Road. To the south of the site, either side of the access, are residential properties. To the west is the property of Ulster Farm By-Products. There is an intervening field between the site and most of the rendering plant; at the northern end of this field is the water treatment plant of Ulster Farm By-Products Limited (UFBP) which extends along the southern bank of the Glenavy River towards and close to the site boundary of the proposed development.

Site

- 2.6 The extent of the EIA application site is illustrated on plan referred to as Planning Application Boundary, appended at PS1.

- 2.7 Access to the site, for ingress only, would be directly off Ballyvannon Road utilising an existing access which would be improved, with an exit via the adjoining premises of UFBP and the existing access to that plant off Ballyvannon Road.
- 2.8 The site extends to approximately 5 hectares currently accessed off Ballyvannon Road via a track leading to a bungalow and accompanying outbuildings set approximately 60m from the access with Ballyvannon Road. To the north and west of the dwelling and outbuildings is the bulk of the site which is predominantly open grassland, with an area of rush and unimproved land. It is surrounded by substantial hedgerows with some significant trees. The northern end of the site is close to the Glenavy River.
- 2.9 The site itself is separated from the river by an area of unimproved land which forms part of the southern bank of the river. This area stretching both to the east and west of the site at this point is designated as a Site of Local Nature and Conservation Importance (SLNCI). This is referred to in the Environmental Statement in the section on Ecology (Terrestrial).
- 2.10 The northerly part of the site is between 17m and 24m lower than the level of Ballyvannon Road as the land falls towards the river to the north. The existing access track off Ballyvannon Road initially falls gently and then more steeply towards the position of the existing dwelling and outbuildings; thereafter, the land falls gently towards the bank of the river.
- 2.11 Access to the site, for ingress only, would be directly off Ballyvannon Road utilising the existing access track which would be improved. This would lead to the proposed position of the offices for the development, with accompanying car park area, approximately 160m from the junction with Ballyvannon Road. A new exit would be formed via a link road into the adjoining premises of UFBP and thus using the existing access to that plant onto Ballyvannon Road. These access

points are clearly shown on the Planning Application Boundary plan appended at PS1.

Proposed Development

2.12 The proposal is to develop a biomass fuelled 100MWe thermal input, 30 MWe electrical output, power plant, which will export approximately 25 MWe to the Northern Ireland grid. The biomass proposed to fuel the power plant is poultry bedding and meat and bone meal, a product of the rendering of animal by-products.

2.13 The submitted plans are:

Location Plan

15562/A0/101/Rev B	Construction Compound and Lay Down Areas
15562/A0/102/Rev A	Planning Proposed Site Layout and Site Section
15562/A1/103	Planning Application Boundary
15562/A1/104	Site Location
15562/A1/110/Rev D	Proposed Cladding Elevations – North & East
15562/A1/111/Rev D	Proposed Cladding Elevations – South & West
15562/A0/113	Main Facility Plan
15562/A2/115	Main Office – Plan and Elevations
15562/A0/118	Cooling Towers – Plan and Elevations
0280.5.01	Landscape Planting (this is accompanied by a Landscape Management Plan, v1, April, 2008)

2.14 The layout of the proposed development and elements of it are shown on the layout plan appended at PS2. There is a main facility, with associated equipment and circulation space with separate offices and car parking, separate waste water treatment building and equipment store, cooling towers, surface water and attenuation lagoon, set at the northerly extent of the site. The whole development would be set within a landscaped setting.

2.15 The main elements of the power plant are:

Main Facility

- Fuel reception building
- Fuel handling and storage building, sufficient for 4 days supply
- Boilerhouse (42m high)
- Turbine hall and switchgear

External Equipment

- Ash bag filtration and silo
- Cooling towers (a bank of three, approximately 15m high)
- Chimney (80m high and 2.9m external width)
- NIE metering and switch yard
- Emergency generator
- Sprinkler tanks and pump house
- Meat and Bone Meal silo
- Gas oil tank (for start up fuel)

Other Buildings and Structures

- Waste water treatment building
- Offices
- Weighbridge and associated office and access control point
- Equipment store
- Employee Parking

Other Features

- Surface water/temperature attenuation lagoon

2.16 The floorspace areas of the main built elements of the proposed development, excluding plant other than the proposed cooling towers, are detailed below.

Area Schedule

Site Area	5.00 hectare
Floor Areas:	
Main Office	128 m ²
Weighbridge Office	32 m ²
Main Facility	
<i>Reception Hall</i>	395 m ²
<i>Amenities Block</i>	90 m ²
<i>Material Holding</i>	1,481 m ²
<i>Boiler Hall</i>	1,181 m ²
<i>Turbine Hall</i>	1,126 m ²
Total	<u>4,273 m²</u>
Cooling Tower	600 m ²
Water Treatment	200 m ²
Metering Station	150 m ²
Total	<u>5,383 m²</u>

- 2.17 The built form covers an area of approximately 2.6 hectares which, with the inclusion of the ancillary elements such as the sustainable urban drainage system (SuDS) and attenuation lagoon, access, offices, circulation road and space, parking area and landscaping, increases the overall size of the site, excluding the exit link via the adjoining industrial plant of Ulster Farm By-Products to the east, to approximately 5 hectares. The landscaping element is a buffer zone of approximately 20m in width around the whole of the site.
- 2.18 The extent, dimensions and appearance of the proposed development and elements of it are provided within the plans accompanying the application.
- 2.19 The main facility (approximately 76m and 106m long), comprising the reception hall, materials handling and amenities block, boiler house and turbine hall, is an integrated series of buildings forming an overall substantial structure. The largest single element is the materials holding hall (64.1m x 22.5m and 23.7m high) while the boiler house will appear as the most dominant element due to its height at

42m. All the other elements of the main facility and items of plant are smaller, though some are also substantial, such as the flue gas cleaning equipment (bag filtration) and ash silo.

- 2.20 The proposed chimneystack will be 80m in height with an external diameter of 2.9m. The height of the chimney has been determined following extensive air dispersal modelling to find the optimum height to ensure dispersion of emissions and compliance with air quality and EAL limits. The chimney is proposed to be positioned at the northerly end of the main facility, taking the flue gases which have passed through the ash precipitation process. The base level of the chimney at the intended site position is 31.5m AOD and the level at the exit point is 111.5m AOD. The chimney height at this exit point is lower than the safeguarding height for aircraft taking off or landing at Belfast International Airport. Belfast International Airport is one of the organisations formally consulted under the pre-application process entered into by Rose Energy and its consultants on its behalf.
- 2.21 It has been calculated that there may be a visible plume from the chimney on approximately 60% of the days during the year. Details of this calculation are provided in the Air Quality Impact Assessment with a visual assessment referred to in the Landscape and Visual Impact Assessment; both of these reports are supporting documents to and form part of the Environmental Statement.
- 2.22 The proposed development would make use of the falling site, the main portion of which would be set down by some 23m lower than the level of Ballyvannon Road. The improved access would drop initially some 12m or so to the proposed office and car park area. The main facility would be stepped with the material intake area and marshalling yard set at 38m AOD and the external ground level dropping by a further 6m to level 31.5m AOD at which level the material holding building (but not the fuel unloading intake to it), boiler house and turbine hall, together with most of the external plant and equipment would be located. The proposed SuDS lagoon, used to contain and control excessive surface water run-off and for

temperature attenuation, would be at the western most point of the site at an approximate level of 29m AOD.

- 2.23 The whole site would be encompassed within a landscape setting with a secure boundary in the form of a palisade fence which would be incorporated into the landscape as appropriate. The depth of the landscape boundary varies but is approximately 20m wide and incorporates proposed structural and dense tree planting and earth mounding, the latter predominantly along the south western boundary; the proposed planting and earth mounding is intended to assist in assimilating some of the bulk and appearance of the proposed development within the wider landscape setting of the site and the proposed development. The SuDS and attenuation lagoon would be of natural appearance and managed to act as an ecological buffer between the Glenavy River and the main developed part of the site.

Appearance

- 2.24 There are two distinct approaches to the overall appearance to this type of large, industrial form of development. One is to express its function in the form of a straightforward building of industrial appearance and the other is to present a different form or shape so that it appears less angular, more homogenous and thus less industrial in appearance. An attempt to superimpose a different appearance other than to express the more functional appearance of the development would result in an increase in its overall height and extent. In view of the nature of the location, the proposed development is of a straightforward building expressing its function, which minimises the scale of this built form. The use of materials, architectural detail and colour assists in breaking up the appearance and perception of the scale of the building.
- 2.25 Profiled metal cladding in various colours will be used throughout the development for the buildings. A full Design and Access Statement has been prepared by RPS and accompanies this ES and EIA application.

Construction Compound

- 2.26 Construction of the proposed development will require an extensive area of land (approximately 2.4 hectares) in order to accommodate the required laying out areas for construction equipment, material, plant and machinery and possible on-site fabrication areas for the installation of the plant itself. An area of land immediately adjoining the site, between the proposed development and the industrial plant of Ulster Farm, has been identified for the purposes of a construction compound and is illustrated on the plan appended at PS3. Further details regarding the construction phase, treatment of the site for the temporary period of its occupation and other related matters are dealt with in detail in the separate chapter within the ES (Chapter 15:Construction).

Operation

- 2.27 The power plant will burn biomass fuel and will be Waste Incineration Directive compliant. Biomass is the biodegradable fraction of products, wastes and residues; this includes plant and animal substances. The proposed power plant is to be fuelled with poultry bedding and meat and bone meal (MBM), a product of rendering. The poultry bedding will come from over 700 poultry producing farms operated by or contracted to Moy Park and O’Kane Poultry and the MBM primarily from the adjacent plant of Ulster Farm By-Products.
- 2.28 The plant is designed to burn the energy equivalent of 300,000 tonnes of poultry bedding – the expected make-up is 220,000Te of poultry bedding and 40,000Te of MBM. The poultry bedding fuel will be received in covered heavy goods vehicles which will be off-loaded within the reception hall behind closed entrance doors. The MBM will be delivered in covered vehicles and off-loaded into a reception bin and stored within a separate silo located to the east side of the reception area.

- 2.29 The fuel is to be combusted in a fluidised bed boiler to produce steam to drive the turbine to generate electricity. The fuel would be burnt at a temperature of a minimum of 850C with flue gasses retained for a minimum of 2 seconds to ensure complete combustion in the interests of both energy efficiency and air quality. Approximately 40,000Te of ash will be created each year for use or disposal off-site.
- 2.30 The plant is designed to be water cooled. The cooling water, which will be re-circulated a number of times, will need to be cooled before disposal and the proposed development includes cooling towers for that purpose.
- 2.31 The proposed cooling towers will be located at the northerly end of the site, between the turbine hall/boiler house and the Glenavy River to the north; in this location, this item of plant will be largely hidden from view. Steam will rise from the cooling towers, in part dependent upon weather conditions.
- 2.32 The proposal is for three cooling towers within an integrated item of plant. The appearance and detailed measurements of the proposed cooling towers are provided on drawing no. 15562/A0/118. In brief, the main structure of the bank of three cooling towers would be 12m high, with the outlets extending a further 2.5m above. The integrated bank of three would be approximately 39m long and a little over 15m in width, with a stairway access attached at one end.
- 2.33 The power plant is designed to be operational for 7,700 hours per year. There will be planned closures for maintenance and, in time and where necessary, re-equipment. Daily operation will be based upon deliveries of fuel and other materials and collection of ash between the hours of 7am and 7pm, Monday to Friday, and 7am to 1pm on Saturdays.

3. CONTEXT FOR THE APPLICATION

- 3.1 Poultry bedding has traditionally been used as a fertiliser on agricultural land. This is not sustainable with the level of poultry bedding produced and the realisation that excessive application of nitrogen and phosphate rich material adversely impacts upon water resources and environmental habitats. The EU Nitrates Directive is aimed at limiting application of fertilisers so that water resources, both for human consumption and as environmental habitats, are protected and quality improved. This Directive has been implemented, as of 1st January, 2007, by the Nitrates Action Programme (Northern Ireland) Regulations, 2006. The limit for nitrates and phosphorus applications on land has been reached. For the poultry industry this requires an alternative use or form of disposal to be found for the poultry bedding.
- 3.2 Climate change is the most serious environmental challenge facing the world today and establishing sustainable energy solutions is a major part of meeting that challenge. Biomass, such as poultry bedding and MBM, are renewable and indigenous energy sources already widely used elsewhere in the UK as a fuel in electricity generation – MBM is of particularly high calorific value, similar to that of coal. By 2012 Northern Ireland is obliged to source 6.3% of its energy from renewable sources but the Government intends to achieve 12% by helping local companies to develop suitable green energy initiatives.
- 3.3 Continued spreading of poultry litter is not an option. Ulster Farmers' Union has estimated that to meet the Phosphorus balances of no more than +10kg P/ha/year by 1 January 2010, reducing to a maximum of +6kg P/ha/year by 1 January 2012, would require around 14.59 hectares per 1000 broilers with no other slurry being spread on the land. This equates to the Northern Ireland poultry industry requiring 300,000 hectares to comply. This is not feasible.

3.4 A report prepared by the Scottish and Northern Ireland Forum for Environmental Research (SNIFFER)¹, for the Environment and Heritage Service, concluded that:

‘In Northern Ireland the problems (with manure management) are particularly acute; there is insufficient land of low nutrient status to accommodate land spreading of manure, and difficulties are compounded by the geographic concentration of intensive pig and poultry units.’

3.5 The current arrangement for field storage of poultry litter over winter ceases on 31 December, 2008, and alternatives must be in hand by then if agreement with the European Commission for an extension to the arrangement is to be achieved. Any solution needs to be both sustainable and economically viable if the poultry industry in Northern Ireland is to survive. For large scale producers (>40,000 birds) the issue is most urgent as they are required to demonstrate under IPPC permitting the disposal route for poultry litter in compliance with the Nitrates and related regulations.

3.6 A review was undertaken on behalf of a consortium of poultry producers into alternative ways of using or disposing of poultry bedding. This study, supported by Invest NI, recommended the use of poultry bedding in an “energy from waste” project – a single poultry litter burning power plant capable of taking up to 300,000 tonnes per annum – providing both a means of disposal of poultry bedding and the generation of “green” electricity. The addition of locally produced MBM, which currently is exported to other parts of the UK primarily for use as a fuel, aids the viability of the project. The alternative solutions for the poultry bedding would be either to landfill it or to export it to elsewhere in the UK for either landfill or use in power generation; neither of these solutions is economically viable and would result in the run down and eventual closure of much of the poultry industry in Northern Ireland.

¹ ‘Methods for Disposal or Processing of Waste Streams from Intensive Livestock Production in Scotland and Northern Ireland’, Scotland and Northern Ireland Forum for Environmental Research, May 2005

- 3.7 The recommended solution of a single litter fired power plant was endorsed by an expert group (EGAUM) established by the Minister for the Department of Agriculture and Rural Development (DARD) not least because it was felt to be capable of making a significant contribution to government targets for the provision of renewable energy. The recommendation of EGAUM was endorsed by the Minister.
- 3.8 In January 2007, as part of the initial exercise in establishing the policy background to a possible biomass fuelled power plant, GBPP wrote to DARD amongst others, The Chief Executive of the Agri-Food and Bio Sciences Institute, formerly part of DARD, responded. The Chief Executive's letter of 2 February, 2007 is appended to the Consultation Statement it confirms the endorsement of the Project Groups recommendations and that its own recommendation to the Minister were accepted, which included a single poultry-litter fired generator, capable of handling 300,000Te per annum and producing up to 25MWe of power. The letter records the Minister's response that:

“These solutions are entirely consistent with the objectives of the Secretary of State's recently announced Environment and Renewable Energy Fund (EREF) to accelerate actions consistent with our Sustainable Development Strategy for the protection of the environment, and promoting the development of renewable energy sources ‘the solutions will also have an important part to play in meeting the requirements of the Action Programme of the Nitrates Directive being agreed with EEC....”

4. CONSULTATION

4.1 A formal pre-application consultation was submitted to The Planning Service in December, 2007, along with a formal request under the EIA Regulations to confirm whether the matters referred to in the submitted Scoping Checklist appropriately and sufficiently reflect what is required to be included within the Environmental Statement to accompany a planning application.

4.2 As part of the pre-application consultation exercise Government Departments, statutory and non-statutory consultees including representatives of the Lough fishermen have been contacted and initial comments invited upon the proposed development.

- Chief Executive, Agri-Food and Biosciences Institute
- Director of Policy and Economics, Department of Agriculture and Rural Development
- Policy Development Branch, Department of Agriculture and Rural Development
- Environmental Policy, Department of Agriculture and Rural Development
- Energy Division, Department of Enterprise, Trade and Investment
- Sustainable Energy Division, DETI
- Arc21
- Lough Neagh Partnership Limited
- Lough Neagh Fisherman's Cooperative Society Limited
- Ulster Angling Federation
- RSPB
- National Trust
- Ulster Course Fishing Federation
- Lough Neagh Sand Traders Association
- Council for Nature Conservation and Countryside
- CEDaR

- Department of Culture, Arts and Leisure
- Countryside and Coast Environment and Heritage Service
- Butterfly Conservation
- Northern Ireland Bat Group
- Ulster Wildlife Trust
- Loughs Agency
- Fisheries Conservancy Board
- Bio Diversity Officer, Lough Neagh and Lower Bann Advisory Committees
- Rivers Agency Headquarters
- Bio Diversity Officer, Lisburn City Council
- Bio Diversity Officer, Antrim Borough Council
- Chief Executive of Lisburn City Council
- Chief Executive of Antrim Borough Council
- Civil Aviation Authority
- Belfast International Airport
- Defence Communications Services Agency
- Defence Estates Organisations – safeguarding by-laws
- Offcom
- Spectrum Planning National Grid Wireless
- Virgin Media
- National Air Traffic Service Navigation, Spectrum and Surveillance

4.3 A public announcement of the proposed development was made on 7 January, 2008 and at the same time Rose Energy undertook a wide dissemination of the proposed development and initiated a public consultation exercise. This included producing a brochure outlining the proposals for the biomass power plant and its location. This was distributed to approximately 4000 households in the Glenavy and Crumlin areas.

- 4.4 A public meeting was held on 23 January, 2008, to explain and present the draft proposals for the power plant. Subsequent meetings have been held with other groups of residents at their request; a local resident committee of four local residents met with members of Rose Energy on 18 March 2008 and again on the 17 April 2008 when the local resident committee made a visit to the application site.
- 4.5 Formal presentations have been made to Ballymena Council at their request (19 May, 2008) and presentations to the Environment Committee (22 May) and Agriculture Committee (27 May) are scheduled. Presentations to local councils in the area are also to be arranged.
- 4.6 Rose Energy has offered to meet with organisations and individuals to explain the proposals and hear representations and to attempt to incorporate concerns expressed in developing this project. Consultation meetings have been held with political groups to provide information. It is expected that further meetings and consultation will occur as the project progresses through planning.
- 4.7 Following submission of the planning application, formal consultation will be undertaken by The Planning Service and not Rose Energy.

5. BEST PRACTICAL ENVIRONMENTAL OPTION AND NEED

5.1 Best Practical Environmental Option (BPEO) is referred to in Part 1 of The Environmental Protection Act, 1990, relating to the authorisation of prescribed processes under the Integrated Pollution Control (IPC) regime – IPC has now been replaced by the Integrated Pollution Protection and Control (IPPC) process which widens the scope of consideration of matters for control. BPEO is a tool to assist in determining the option that provides the most benefit and least damage to the environment as a whole, at acceptable cost, looking to both the short and long term. It is a tool referred to in the legislation to review impacts from a proposed development option and establish whether the option is BPEO rather than whether it is BPEO for the incoming waste stream. However, in practice the one is inevitably linked to the other.

5.2 BPEO has been particularly used in relation to waste policy. Following on from the EU Landfill Directive, and the consequential setting of targets and a landfill tax regime, landfilling as BPEO is being overridden by other considerations and as a tool in decision making and it is less valuable than it was.

5.3 The current DOE, EHS guidance, “BPEO – Decision makers’ guide”, is aimed at District Councils and their need to respond to targets for recycling and composting and the demands of the Landfill Directive in developing and choosing waste management options for their Waste Management Plans. The guidance recognises that:

“...the concept [BPEO] is not sufficiently precise to be used to justify the selection of sites...”

5.4 The judgement of what is BPEO is also a difficult one to assess when the matters under consideration are diverse, and also in respect to an assessment over the short and long term. In the public regime, BPEO is effectively overtaken by the European Directive for Strategic Environmental Assessment (2001/442/EC) which requires an “assessment of the effects of certain plans and programmes on

the environment". The SEA Directive, as it is referred to, looks also at a wider scale.

- 5.5 Planning Policy Statement 11, Planning and Waste Management, refers to the principles of sustainable waste management and the inclusion and underpinning of the BPEO within Waste Management Strategies. As referred to at paragraph 1.29:

"BPEO is a key principle in pursuing greater sustainability and waste management".

- 5.6 This section of the Planning Statement reviews the approach, within the regulatory and environmental regimes, that has resulted in the choice of the option for a poultry litter fired power plant and the current proposal for a poultry bedding and meat and bone meal biomass fuelled power plant. The review in this section does not address choice of the site at Glenavy.

The Nitrates Directive

- 5.7 In section 3 above, a brief review of the context of the application is given. The provision of the Nitrates Directive and its incorporation into UK legislation is a key driving force behind the proposed development and the subsequent reviews by both the consortium of poultry producers and various Government reports have led to determination that the proposed solution of using poultry bedding as a fuel in an electricity generating power plant represents the optimum solution for dealing with the problem of disposing of this material in lieu of land spread.

5.8 The Directive focuses on the undesirable effects of nutrient enrichment of waters, known as eutrophication. This is defined in the Directive as:

“The enrichment of water by nitrogen compounds, causing an accelerated growth of algae and high forms of plant life to produce an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned”.

Concerns about water quality have been reinforced in the EU Water Framework Directive (2000/60/EEC) which requires by 2015 that all water bodies should be at least of good ecological status.

5.9 A DoE-DARD Scientific Working Group was established in 2002 to report on the “Environmental Aspects of the Nitrates Directive in Northern Ireland”. The Scientific Working Group summarised the problems of effects on water quality associated with eutrophication as:

- Health risks from contamination of drinking water supplies and recreational waters by toxic algae and algal scums
- Added costs in removal of algae from water intakes and water treatment facilities
- Loss of habitats leading to loss of species bio-diversity
- Loss of fisheries
- Limits on use or added costs for industry and agriculture, and
- Undesirable aesthetic impacts such as odours, loss of transparency and clogging by weeds leading to loss of amenity value.

5.10 As referred to in the supporting documents to the Ecology section of the Environmental Statement, Lough Neagh has been identified as hyper-eutrophic – it is one of the most eutrophied lakes in the world. The Lough is also one of the most important sources of water for human consumption.

- 5.11 The DoE-DARD Working Group identified that nitrates enrichment is a problem of moderate scale in Northern Ireland but that phosphorus enrichment, also resulting from fertiliser application and sewage treatment plants, is significantly more serious.
- 5.12 Nitrate losses – that is excessive nitrates which are not taken up in plant growth – are recognised as being largely via leaching and therefore there may be considerable time lags before reaching water courses and groundwater. The effects of reducing excessive nitrates loading on land will, therefore, take time to be realised. By contrast, surface loss of phosphorus is the dominant means by which this nutrient enricher is released and thus the effects of it on the water environment are more immediate.
- 5.13 The Nitrates Directive does not regulate phosphorus. However, in recognition of the problem resulting from excess phosphorus application, new regulations were introduced on 1 January, 2007 – Phosphorus (Use in Agriculture) Regulations (Northern Ireland), 2006 – to control the level of fertiliser application. The new Regulations note that the available phosphate content of organic manures such as broiler/turkey dry manure (60% dry matter) is assessed at 25kg P₂O₅ per tonne. The Regulations' aim is to prevent water pollution and there is a legal duty upon the person charged with the management of an agricultural holding not to cause directly or indirectly the entry of fertiliser into water or groundwater.
- 5.14 Control of phosphorus losses must be achieved if there are to be improvements in water quality. The requirement is to reduce phosphorus application to no more than +10kg P/ha/year by 1 January 2010, reducing to a maximum of +6kg P/ha/year by 1 January 2012. This also requires a long close period for the application of fertilisers – phosphorus is primarily lost by run-off, not leaching, and take-up by crops/grass is limited during the winter months – in addition to the reductions already made in the input of phosphorus in feed on farms. The close period in Northern Ireland is from 1 October to 31 January and storage of excessive manures, including poultry bedding, is required for that period.

5.15 Currently there is field storage under an arrangement which is scheduled to cease at the end of 2008, when the requirements for a close season for fertiliser application are brought into full effect, scheduled for 2009. The Northern Ireland Government has a subsidy scheme for constructing storage facilities for manures. Based on a 60% subsidy, the present scheme has supported applications for the storage of agricultural manures to the total value of in excess of £200m. While storage may overcome the problem of what to do with manures during the period that they cannot be applied to land under the Nitrates Action Programme, it does not solve the problem of how to deal with the excess of manures from storage during the non-closed periods. The need to find an alternative means of disposal remains.

SNIFFER

5.16 A report prepared by the Scottish and Northern Ireland Forum for Environmental Research (SNIFFER)², for the Environment and Heritage Service and the Scottish Environmental Protection Agency, reported in May, 2005:

“Combustion for energy production is a tried and tested route and almost all broiler litter in Scotland is utilized by this means”, and

“this would have the potential to remove virtually all the broiler litter from the land bank. This would produce much needed renewable energy with minimal adverse environmental impacts and many positive impacts.”

² ‘Methods for Disposal or Processing of Waste Streams from Intensive Livestock Production in Scotland and Northern Ireland’, Scotland and Northern Ireland Forum for Environmental Research, May 2005

The research organisation recommended that subject to detailed feasibility studies of individual proposals,

“...that combustion of broiler litter is adopted as an alternative utilization for almost all litter produced in Northern Ireland, as it currently is in Scotland”.

EGAUM

5.17 The Expert Group on Alternative Use of Manures set up by the Minister for Agriculture was assisted in its work by a report prepared by the Global Research Unit, Department of Agriculture and Rural Development for Northern Ireland, and the Agricultural Research Institute of Northern Ireland. That report, “An Evaluation of Manure Treatment Systems Designed to Improve Nutrient Management” (December 2005), reviewed various slurry treatment technologies and alternative manure utilisation systems and energy generation. It also reviewed ‘turnkey’ systems for manure processing and new technology solutions.

5.18 In respect of manure utilisation, which includes poultry litter, the research report identified the following possibilities:

- Composting
- Pelletising
- Fertiliser production

5.19 In respect of composting of solids extracted from manures, the report identified that it is not always acceptable to many potential users because of the knowledge of associated contamination risks from animal wastes and the fact that a profitable market for compost products from this source had yet to be developed. Consequently, this potential form of manure utilisation was considered not to be a practicable option.

- 5.20 On pelletising, this process, which uses dried cake extract following centrifugal separation of slurry/manure, involves high temperature and pressure to sterilise pellets that can be used as an organic fertiliser or as fuel. It is a capital intensive process with no markets yet established in this country and where the issue remains that ultimately it involves the application of a fertiliser to land if not used as a fuel. Also, the example turn key plant requires a very large site, in excess of 16 hectares.
- 5.21 Fertiliser production was identified via various turnkey plants. The report identifies, however, that the need to remove phosphorus from Northern Ireland farms is essential and that the production of phosphorus rich fertiliser is therefore of limited direct benefit and such a product would need to be exported either as a fertiliser or as a chemical industrial feedstock, the latter requiring the need to meet stringent chemical quality and safety requirements. The export of such fertiliser to other countries, many of which have similar problems of eutrophication to those in Northern Ireland, was deemed to be unrealistic and no market was identified. Moreover, the technology involved for deriving the nutrients from slurries and manures was considered not to be proven.
- 5.22 With respect to energy generation, the following were identified:
- Anaerobic digestion
 - Gasification
 - Incineration
- 5.23 Anaerobic digestion – essentially natural breakdown of organic matter by bacteria in the absence of air – creates methane which then can be used as a gas as a source for heat or generating electricity. Use of poultry manure would require the addition of other and wetter materials as poultry litter is relatively dry. Anaerobic digestion is beneficial for rendering hazardous and polluting organic material into potentially innocuous and marketable by-products as well as the generation of renewable energy. But it does not dispose of the nutrients of nitrogen and phosphorus and, indeed, the resulting digestate following the process contains

25% inorganic nitrogen and has a higher ph level than the feedstock material. Overall, anaerobic digestion was recommended by the research group for dealing with slurries but not for dealing with poultry litter.

- 5.24 Gasification enables bio-mass materials to be converted into a gaseous fuel under the control of conditions of low oxygen supply and high temperature. Large scale gasification is not a proven or reliable technology (though there is now some evidence of small scale plants being successfully operated). The researchers saw potential in the process for separated manure solids and potentially digestate from anaerobic digestion plants.
- 5.25 The last option is “incineration”, that is the use of agricultural biomass as a fuel in an ‘energy from waste’ (EfW) plant. The report identified the existing poultry manure incinerators within the UK, including the relatively new plant at Westfield at Fife in Scotland which generates electricity, with the ash being used as a fertiliser; the Westfield plant is an EU demonstration plant.
- 5.26 EGAUM found in respect of the poultry industry that while there may theoretically be sufficient land to spread poultry litter in Northern Ireland while remaining within the 170 kg per hectare limitation imposed under the Nitrates Action Programme, much of the available land is unsuitable for land spread or is remote from intensive areas of production and the cost would exceed the total profit of the industry. Moreover, land spreading would simply add yet more excess phosphorus content to the already high levels of phosphorus in the soils of Northern Ireland.
- 5.27 EGAUM reported in March 2006 and recommended the urgent need for specific business cases and project plans for “*the anaerobic digester solution for the pig industry and the litter fired generator for the poultry sector to be brought forward by industry*”. In recommending the litter fired generator for the poultry sector, EGAUM was aware of the feasibility study commissioned by the poultry industry and that such a proposed development could be financially viable. It was this

recommendation which was endorsed by the Minister as referred to above in section 3.

The Technical Solution

- 5.28 The feasibility study commissioned by the industry, with the technical and financial support of Invest in Northern Ireland, the EHS commissioned report from SNIFFER and EGAUM all came to the conclusion that a poultry litter fired electricity generating plant was the appropriate solution to the disposal problem of excess poultry manure and the need, both legislatively and in the interests of the environment and particularly water quality, to reduce nitrates and phosphorus loadings on land. Alternative solutions are limited and do not resolve the essential problem of too much nitrogen and too much phosphorus, while being a practical and viable solution.
- 5.29 BPEO requires not only a satisfactory environmental solution but also one which is practical and viable. As noted earlier, some £200m of capital cost has been committed to temporary storage facilities for other sectors of agriculture – the poultry industry did not take up the grant assistance as the power plant project has been seen and promoted as the way forward. Unless the current temporary arrangement for field storage can be extended, then the need for considerable capital expenditure on temporary storage facilities for the poultry industry will be necessary. This will significantly increase the cost burden upon an industry which is highly competitive and operates on very tight margins, and may jeopardise its future, the jobs it provides and contribution to the economy of Northern Ireland.
- 5.30 As referred within the Case for the Application and section Z, Environmental Benefits, there are other benefits from this particular solution rather than adoption of other technologies. Moreover, in terms of the Waste Hierarchy it is considered that this is the optimum solution – other technologies still result in residues which have to be disposed of, such as the digestate from anaerobic digestion, or do not solve the problem of reducing or capturing the amount of nitrogen and

phosphorus. Combusting poultry bedding as a fuel provides a complete solution whilst also deriving energy and thus pushing the management of this agricultural waste up the waste hierarchy.

- 5.31 In respect of the residue from combustion, that is ash, the current proposal contained within the application is that it will be landfilled which PPS11 recognises to be BPEO. However, the possibilities for its use within products will be reviewed once proper analysis and testing of the ash from the process of burning poultry litter and meat and bone meal after commissioning of the plant.
- 5.32 As far as the proposed technology is concerned, and this extends to the adoption of an evaporative water cooling system rather than a closed water loop system, it is considered that the proposal represents BPEO.

6. POLICY

6.1 The policy background falls into two main categories: strategic policy relating to national energy policies, primarily reflecting the need to address climate change issues, and planning policies.

6.2 UK ENERGY POLICY

6.2.1 *“Climate change represents a potentially catastrophic threat, but it is within our control to address it – and address it we must”* (Tony Blair, Former Prime Minister).

6.2.2 The Intergovernmental Panel on Climate Change highlighted that we are already experiencing the effects of climate change and if these changes deepen and intensify we will see even more extreme impacts.

6.2.3 The UK Government believes that climate change is the greatest long-term challenge facing the world today. Addressing climate change is, therefore, the Government’s principal concern for sustainable development. The UK is on track to meet, or even exceed, its commitment under the Kyoto Protocol to reduce emissions of greenhouse gases to 12.5 per cent below 1990 levels by 2008-12. The UK’s current commitment is to a 20% reduction in greenhouse gas emissions from 1990 levels and a 16% target imposed by new EC proposals for 2020 based on 2005 levels.

The Energy Challenge: Energy Review Report 2006, DTI

6.2.4 The report reaffirms that renewable energy is an integral part of the Government’s strategy for tackling climate change and it proposes a range of measures to promote its growth which taken together could, the Government believes, achieve 20% of our electricity coming from renewable sources by 2020. It also seeks to limit the rise in carbon emissions confirming that Government’s industry and individuals should take into account the costs associated with the emissions for

which they are responsible. It continues that “*a key role for the Government is to put in place a framework which, by placing a value on carbon, provides a financial incentive for businesses and households to incorporate the climate change impact of their activities*”. The goal of a 60% reduction in carbon dioxide emissions by 2050 means that it is not just a question of a reduction of carbon intensity through low carbon energy sources such as renewables but also a matter of looking at means of saving energy through, for example, reduced transportation of goods.

6.2.5 The report acknowledges that as the Government recognises the importance of deriving more of our energy from renewable sources thus reducing our reliance on imported fossil fuels and particularly as renewable energy produces very little carbon or other greenhouse gases, it proposes to strengthen the framework that supports the development and deployment of renewable technologies. With this strategy, the Government believes “*that we can achieve 20% of our electricity coming from renewable sources 2020*”.

6.2.6 Whilst the Government’s Waste Policy prioritises prevention, reuse and recycling over the recovery of energy from residual wastes, where prevention reuse and recycling are not possible, recovering energy from waste can contribute to the energy policy goal.

6.2.7 The report recognises that there is strong opposition from some sections of the public which has hindered the development of energy from waste technologies in the UK. This opposition is motivated primarily by fears over supposed impacts on human health, as well as by concerns that excessive investment in incineration, in particular, might “*lock in*” wastes which could otherwise could have been recycled. The Government believes that the first of these concerns is not supported by the available evidence, whilst the second can be addressed through the careful design of local waste strategies”.

6.2.8 In respect of reducing carbon emission from vehicles, the report states that the Government recognises “*its responsibilities to secure a modern, efficient system that gets people to work, allows businesses to operate effectively, enables goods to be transported efficiently and allows people to make the most of their leisure time*”. The aim of reducing distances travelled by lorries by locating the proposed development centrally to its suppliers will help to achieve the Government’s transport goals whilst meeting our environmental obligations.

6.2.9 Lastly, the Government is concerned about the timely delivery of energy infrastructure which plays an important role in maintaining the reliability of our energy supplies as securing the necessary planning consents can be a major cause of delays for all types of energy projects. Therefore, the Government is undertaking further work on options to ensure appropriate and predictable timings for decisions on applications for energy developments.

6.3 **NORTHERN IRELAND ENERGY POLICY**

Energy: A Strategic Framework for Northern Ireland, DTI, June 2004

6.3.1 This strategic framework seeks to make a realistic assessment of the energy challenges which Northern Ireland faces, to prioritise the goals and to establish a basis for collaborative action by key stakeholders. The main challenges identified include:

- Narrowing the differential between electricity prices in Northern Ireland and other regions of the UK and the EU, particularly the Republic of Ireland;
- Opening the markets in both electricity and gas which brings both competition and choice;
- Ensuring a proper balance of fuel diversity, cost and security of supply for power generation;
- Increasing the use of renewable energy for heat and power generation.

6.3.2 The above is translated into a series of goals including Policy Goal (iii): Enhancing Sustainability in Energy. It explains that a “*key determinant of our priorities in this area is the range of environmental strategies which aim to increase the amount of energy obtained from renewable sources and also apply significant downward pressure on energy usage*”. This aim has been translated into actions and the intention is to work with NIAER and other key stakeholders to, *inter alia*:

- Require that by 2012 at least 12% of all electricity consumed in Northern Ireland is obtained from indigenous renewable energy sources – at least 15% of which must be generated by non-wind technologies;
- Implement a Renewables Obligation in Northern Ireland from April 2005 (now in force rising to 6.3% of consumption by 2012) with the Renewable Obligation Certificates being mutually recognised and traded freely throughout the UK.
- In collaboration with the DARD, promote centralised and embedded generation which is fully integrated into the rural economy offering enhanced opportunities for diversification and wealth creation;
- Ensure the electricity transmission and distribution system is sufficiently robust and flexible to effectively manage an increasing contribution from renewable energy;
- Develop support mechanisms to encourage enhanced programmes of renewable energy, CHP and energy efficiency and build capacity to increase consumer choice, competition and quality in the provision of renewable energy and CHP technologies.

6.3.3 With this strategic framework, it was intended in 2004 when it was published, that Northern Ireland would achieve a “*successful and sustainable long term future for energy... the coming decade offers us the opportunity to progress further and places Northern Ireland’s energy agenda for the benefit of all energy consumers and the local economy in the light of new competition and environmental drivers*”.

Renewable Energy Action Plan, DARD, January 2007

- 6.3.4 The aim of the plan is to ensure that the schemes and services provided by DARD will enable farmers, landowners, and the wider rural community to capitalise on the opportunities presented by renewable energy within the strategic context of energy policy, tackling climate change, waste management and sustainable development. In acknowledging changes in agriculture, which is dominated by grass-based enterprises, it highlights that “renewable energy technologies will also create opportunities for farmers”. It continues that “*with an increasing emphasis on sustainable waste management and minimising the environmental footprint of agriculture, the use of technologies such as anaerobic digestion may enable livestock farmers to convert what are now largely regarded as costly waste streams into a possible source of revenue (or, at a minimum, to reduce the costs of sustainable waste management)*”.
- 6.3.5 The plan also refers to a number of environmental directives which have had an indirect bearing on the development of renewable technologies which includes the Nitrates Directive which aims to reduce and prevent the pollution of water caused by nitrates from agricultural sources. It concludes that “*all of these directives will drive a greater focus on the sustainable management of waste streams with some renewable energy technologies having the potential to play a part in addressing this issue, thereby offering integrated approach to waste management and renewable energy production*”.
- 6.3.6 It also refers to a number of measures which the Government has introduced (or will be introducing) to incentivise the development and employment of renewable sources of energy in Northern Ireland. These include the Northern Ireland Renewable’s Obligation (NIRO) which was introduced by DETI in April 2005 placing “*a legal requirement on electricity suppliers to provide evidence that a specified and annually increasing proportion of their electricity supplied to final customers has been generated from renewable sources, or to pay a buy-out fee that is proportionate to any shortfall*”. In March 2006, 3% of Northern Ireland’s electricity consumption was derived from indigenous, renewable energy sources

and though wind is currently the predominant source it acknowledges that non-wind sources of renewable energy for electricity generation are emerging and cites, for example, the major biomass CHP plant opened by Balcas in Enniskillen in November 2005.

6.3.7 Of importance to this project, DARD is proposing to establish an Energy from Agri-Food Waste Challenge Fund, co-financed under the EU Competitiveness Structural Funds Programme 2007 – 2013 to encourage the livestock and food processing sectors to develop a range of sustainable technologies which will utilise agricultural manures and food processing wastes to produce renewable energy. At present approximately 9.7 million tonnes of manure is produced from housed livestock each year in Northern Ireland and it is acknowledged that it can represent a significant waste disposal problem. However as dry organic waste, especially poultry litter, can be burnt directly to generate heat and/or power, the document recognises that it represents an opportunity to address a waste disposal problem in a sustainable way and create a renewable energy resource. The proposed fund will support a range of full scale technologies and approaches to manage manures and waste from agri-food industry, with a purpose of:

- Reducing the nitrate and phosphate inputs to soils and waterways;
- Exploring and demonstrating cost-effective and sustainable methods of dealing with agri-food wastes;
- Promoting alternative energy sources to the rural communities; and
- Broadening the energy supply base in Northern Ireland.

6.3.8 The Action Plan concludes that the renewables energy sector is in its infancy in Northern Ireland and in the expectation of rising fossil fuel costs, improvements in technology and reductions in technology costs, it states that it is appropriate for Northern Ireland to position itself so that it can capitalise on the potential opportunities in renewable energy production. It continues that the land-based sector is uniquely placed to grasp this opportunity acknowledging that the Government has a significant role in steering the successful development of this

new sector in a balanced and orderly expansion of both the supply of, and demand for, sustainable renewable energy solutions.

Draft Planning Policy Statement 18: Renewable Energy

- 6.3.9 This consultation paper was issued on 23 November, 2007, and sets out the Government's planning policy for development that generates energy from renewable resources. When finalised, it will supersede Policy PSU12, Renewable Energy, of the Planning Strategy for Rural Northern Ireland. It is the culmination of a series of reports and formulates the land use planning policies which will regulate and facilitate new energy facilities.
- 6.3.10 The introduction to PPS18 explains that renewable energy comes from energy sources that are continuously replenished by nature and one of the main sources is bio-mass which includes wood, biodegradable waste and energy crops. It continues that an increase in renewable electricity and heat generation as a means of reducing greenhouse gases and in particular CO₂ forms an important part of Northern Ireland's efforts to tackle climate change. Another benefit of renewable energy is that it will help to reduce other forms of environmental and social damage arising from the use of fossil fuels.
- 6.3.11 It explains, in para 1.7, the benefits of renewable energy technology which has the potential to develop an indigenous renewable energy industry and provide the range of opportunities to support the local economy including:
- direct and indirect employment opportunities during the construction and operational phases;
 - revenue to the owners of the land on which they are built;
 - employment and the manufacture of components and services;
 - opportunities for rural diversification, the alternative agricultural use of land and employment and the production of biomass crops;
 - a beneficial route for the utilisation of residues and waste that might otherwise be difficult or expensive to dispose of; and

- an improved source of electricity in remote locations.

6.3.12 Draft PPS18 states its primary aim as “*encouraging and facilitating the provision and siting of renewable energy generating facilities in appropriate locations within the built and natural environment*”. Related to this aim are 11 objectives which include:

- to contribute to the alleviation of climate change through reducing greenhouse gas emissions;
- to contribute to the regional target of 12% of electricity generation by 2012, and 40% by 2025 from renewable energy sources;
- to assist the diversification of energy supply and a more competitive energy market;
- encourage economic growth and rural diversification associated with the development of indigenous renewable energy industry.

6.3.13 Against this background, a number of policies are developed including Policy RE1 which is relevant to the proposed development. This states that development which generates energy from renewable resources will be permitted provided the proposal, and any associated buildings and infrastructure (including transmission lines), would not result in an unacceptable adverse impact on:

- a) Public safety, human health, or residential amenity;
- b) Visual amenity and landscape character;
- c) Biodiversity, nature conservation or built heritage interests;
- d) Local natural resources, including air and water quality; and
- e) Public access to the countryside.

6.3.14 Proposals will be expected to be located at, or as close as possible to, the source of the resource needed for that particular technology, unless, in the case of a Combined Heat and Power scheme, it can be demonstrated that the benefits of the scheme outweigh the costs of transportation and an end user is identified.

6.3.15 Annex 1 contains information and best practice guidance for renewable energy development proposals and of relevance to the development proposal is Section B on Biomass.

Biomass Energy Production

6.3.16 It is recognised that poultry litter is one of the principal dry biomass fuel sources and when used in combustion in place of fossil fuels, a net reduction in carbon emissions is achieved. The benefit of using agricultural sources of biomass is that *“it is a good fuel for electricity generation with nearly half the calorific value of coal”*.

6.3.17 There are three locational issues related to biomass energy production:

- feedstock availability
- customers
- and grid connection.

6.3.18 In planning terms, feedstock availability is important and therefore para B39 advises that *“generally, it is preferable to locate the proposed plant at the ‘centre of gravity’ of the proposed feedstock”*. The proposed site at Glenavy is adjacent to a primary and substantial source of fuel feedstock, that is MBM from the UFBP. Having regard for the need for bio security, the ability to locate the plant adjacent such a large single source of fuel is beneficial not only to the viability of the project but also in reducing the need for travel and transport of fuel.

6.3.19 In identifying relevant planning issues, para B44 explains that they can relate to the power plant and associated impacts and not the production of the fuel source. However, there are associated considerations such as the impact of growing (where relevant) and collecting the fuel as well as environmental issues associated with some fuel supply (eg impact on landscape, ecology, archaeology, land use etc) which are covered by Environmental Impact Assessments.

6.3.20 Para B45 identifies the issues which will be considered when determining an application for a biomass fuelled power plant which are:

- The positive benefit of the plant to the local economy.
- Visual intrusion.
- Noise from traffic and plant operations.
- Any effects on health, local ecology or conservation from the plant, and airborne and waterborne emissions.
- Traffic to and from the site.
- Greenhouse gas mitigation.

The above issues are addressed in the various reports submitted with the application.

6.3.21 The consultation period for Draft PPS18, Renewable Energy, ended on 21 March, 2008. Given the importance of renewable energy in the Government's response to climate change it is expected that the momentum in establishing a framework for the production of renewable energy in Northern Ireland will be monitored.

6.4 **WASTE POLICIES**

Planning Policy Statement 11: Planning and Waste Management

6.4.1 Waste is defined in the Introduction to PPS11 as the "*unwanted by-product of industrial, commercial and domestic activities or anything otherwise discarded*". With the increase in waste, sustainability concerns are being raised and this is reflected in para. 1.2, "*in the priority now being given to the reduction of waste at source, to its re-use, its recovery by recycling and to its potential as a source of energy*". It is advised that all these activities need to be carried out in a manner consistent with the principle of sustainable development and without imposing an unnecessary burden on industry and local authorities.

- 6.4.2 This new approach is set out in the framework contained in the Waste Management Strategy (WMS) and is also reinforced by the EC Framework Directive on Waste and the more recent Landfill Directive which sets out a common framework for dealing with waste by individual countries. The aim is for the EC to be self-sufficient and to deal with waste as close as possible to its point of origin, as is being proposed in this development.
- 6.4.3 In 2002 over 90% of Northern Ireland's waste went to landfill. For the UK as a whole, the EC Landfill Directive requires reduction of the amount of Biodegradable Municipal Waste (BMW) going to landfill to 35% of the 1999 levels by 2020. Para 1.5 explains that PPS11 has an important role in supporting the development of a range of waste management facilities consistent with the principles and objectives of the WMS and Waste Management Plans (WMPs). Therefore, both are important material considerations in assessing development proposals for waste management facilities.
- 6.4.4 At present, the field storage and spreading of poultry bedding only continues under a temporary derogation from the European Commission. An alternative solution for poultry bedding would be to landfill it which is, as stated in para. 8.2, at the bottom of the waste management hierarchy and is the least sustainable waste management option. In particular an issue associated with the disposal of poultry bedding is the leachate into the soil, groundwater and surface water of nitrates. Landfill is not only an inappropriate means of disposal of poultry bedding, but also the cost of disposal would be more than the total profit of the industry.
- 6.4.5 For Waste Collection and Treatment Facilities, Policy WM2 permits for such (collection and treatment facilities) development proposals where:
- (a) there is a need for the facility as established through the WMS and the relevant WMP.

- (b) the proposed facility is the Best Practicable Environmental Option (BPEO); and
- (c) the proposed facility complies with one or more of the following locational criteria which in the case of the proposed development would be:-
- Where the proposal is in the countryside, it involves the reuse of existing buildings or is on land within or adjacent to existing building groups. Alternatively where it is demonstrated that new buildings/plant are need, these must have an acceptable visual and environmental impact; and
- (d) the following criteria are also met:
- In the case of a regional scale waste collection or treatment facility, its location relates closely to and benefits from easy access to key transport corridors and, where practicable makes use of the alternative transport modes of rail and water;
 - Proposals involving the sorting and processing of waste, are carried out within a purpose built or appropriately modified existing building, unless it can be carried out in the open;
 - The built development associated with the proposed methods of handling, storage, treatment and processing of waste is appropriate to the nature and hazards of the waste(s) concerned;
 - Proposals for the incineration of waste and other thermal processes, shall incorporate measures to maximise energy recovery both in the form of heat and electricity, taking account of prevailing technology, economics and characteristics of the waste stream involved;

- It will not result in an unacceptable adverse environmental impact that cannot be prevented or appropriately controlled by mitigating measures.

6.4.6 There are a variety of waste treatment projects covered by Policy WM2 and the proposed development falls within the category of a Waste Treatment and Energy Recovery Plant (EfW) which is considered in paragraphs 7.16-19. It explains that *“incinerators have the potential for energy recovery in the form of electricity and/or heat and power which may provide additional environmental benefit and is higher up the waste hierarchy than treatment without energy recovery”*. As poultry bedding will be limited for use as a fertiliser but still needs to be disposed of, if used in a biomass fuelled power plant it can provide an additional environmental benefit by providing energy recovery. Energy recovery is higher up the waste hierarchy and is to be preferred to disposal.

6.4.7 The visual impact of the proposed plant is an important consideration in a rural area where buildings with a high chimneystack may impact on the landscape. Therefore, a suitable landscaping scheme would be required. Another consideration is the transportation of waste and the need for good accessibility to the main road network. Moreover, it is important that waste is delivered and residue is removed in properly designed vehicles to ensure the avoidance of spillages.

6.5 **SUSTAINABLE DEVELOPMENT**

6.5.1 There are a number of key documents concerning sustainable development in Northern Ireland and the following are relevant to the application proposal.

Towards Resource Management: The Northern Ireland Waste Management Strategy 2006 – 2020, (DoE 2006)

- 6.5.2 The new Waste Management Strategy contains key policies and actions and it applies 6 principles of sustainable development to waste management in ways that protect and enhance the natural and physical environment and the use of resources and energy as efficiently as possible.
- 6.5.3 Although much of the waste referred to in this document is generated by households and businesses, it recognises that the diversion of waste away from landfill to recycling and other treatment methods, such as composting and energy recovery, will require the development of significant new waste management infrastructure.
- 6.5.4 The aim of this strategy is to support the development of an integrated network of facilities for the recycling, recovery and disposal of waste within Northern Ireland and to ensure that these facilities are planned, designed and operated to provide a high level of protection for the environment and for public health.
- 6.5.5 The policies and actions to facilitate the planning procurement of the necessary new facilities fall within the provisions for waste management planning in Northern Ireland and the procurement of the infrastructure. It acknowledges that the:

“Government continues in its firm belief that energy from waste will be a necessary component of the preferred infrastructure, both in terms of its policies and renewable energy and to ensure that Northern Ireland meets its landfill diversion targets. Therefore a range of proven and new technologies are becoming available to reduce the amount of waste sent to landfill including anaerobic digestion, composting, mechanical, biological treatment and thermal treatment”.

It acknowledges that delivery of the strategy will depend on strong Government leadership and effective implementation which are crucial to success.

First Steps towards Sustainability: A Sustainable Development Strategy for Northern Ireland, (DoE, May 2006)

6.5.6 This is the first Northern Ireland Sustainable Development Strategy and together with the subsequent Implementation Plan, “A Positive Step” it represents the first steps towards tackling the long term objective of securing a better future for the present generation and protecting future generations to come.

6.5.7 The six guiding principles which underpin the strategy includes:

- Achieving a Sustainable Economy – Building a strong, stable and sustainable economy that provides prosperity and opportunities for all, and in which environmental social costs fall on those who impose (polluter pays), and efficient resource is incentivised
- Using Sound Science Responsibility – Ensuring policy is developed and implemented on the basis of strong scientific evidence, whilst taking into account scientific uncertainty (through the precautionary principle) as well as public attitudes and values
- Promoting Opportunity and Innovation – Innovation is the successful exploitation of new ideas; incorporating new technologies, design and best practice. Opportunities lie in the development of new markets in environmental technologies and other sustainable development related areas/fields.

Along with the other three guiding principles of living within environmental limits, ensuring a healthy and just society and promoting good governance “*they will form the basis for Government policy in Northern Ireland*”.

6.5.8 There are three strategic objectives for Sustainable Consumption and Production and Strategic Objective 1 aims to become more resource efficient and requires:

Key Targets:

- Northern Ireland economy will achieve 85% resource efficiency by 2025;
- Stabilise the Northern Ireland ecological footprint by 2015 and reduce it thereafter

Important Steps:

- Progressive reduction of biodegradable waste going to landfill and reduction of waste in general across all sectors.
- Encourage and incentivise the business case for resource efficiency and waste minimisation.
- Promote materials recovery, re-use, and recycling through initiative such as Waste and Resources Action Plan (WRAP)
- Progressive reduction in leakage of mains water.

6.5.9 There are five strategic objectives for Natural Resource Protection and Environmental Enhancement, one of which is to protect and enhance the freshwater and marine environment which includes the implementation of the Nitrates Directive Action Programme to help reduce nitrate and phosphate inputs to waterways and the level eutrophication within them.

6.5.10 In facing the Challenge of Climate Change and Energy, three strategic objectives have been chosen for the strategy:

- To reduce greenhouse gas emissions, principally by promoting energy efficiency and the use of renewables;
- To establish Northern Ireland as a world exemplar in the development and use of renewable energy;
- To plan and prepare for climate change impacts in Northern Ireland.

6.5.11 The means for achieving these objectives are identified and include switching to Renewable Energy. It is recognised that the development of the renewable energy sector in Northern Ireland is critical as this will help to reduce our dependence on fossil fuels and significantly reduce emissions of carbon dioxide and other

greenhouse gases. The strategy seeks to set challenging targets by 2025 of having 40% of electricity consumed in Northern Ireland obtained from indigenous renewable energy sources, of which at least of 25% must be generated by non-wind technologies. The Rose Energy power plant will contribute around 40% of the non-wind renewable energy target and could be operating by 2012.

All – Island “2020 Vision” for Renewable Energy

- 6.5.12 The consultation paper on a 2020 vision for renewable energy sought views on the development of a joint Northern Ireland/Republic of Ireland Strategy for the renewable energy aspects of the all-island energy market leading up to 2020 and beyond. It was stated that a key aspect of this work was a comprehensive study of the electricity grid which will require selective adaptation and different management protocols, to maximise the penetration of renewables for the future.

Renewables Obligation

- 6.5.13 This places a legal requirement on electricity suppliers to provide evidence to specify an annually increasing proportion of their electricity supplied to final customers has been generated from renewable sources or to pay a buy-out that is proportionate to any shortfall.

Agriculture

- 6.5.14 A policy and action plan for Developing the Renewable Energy Potential of the Agri-Food and Forestry Sectors will be developed to ensure that these technologies are properly exploited.

Planning

- 6.5.15 It is stated that renewables deployment will continue to be supported by the Northern Ireland planning process and work on PPS18, Renewable Energy, together with a review of planning controls for small-scale renewable energy developments will be taken forward in the context of wider Government commitment to promote and encourage greater deployment of renewable technologies.

A Positive Step – A Sustainable Development Implementation Plan for Northern Ireland, November 2006

6.5.16 The Implementation Plan sets out in detail the Northern Ireland Government's approach to the delivery of the objectives of the Northern Ireland Sustainable Development Strategy published in May 2006. The current energy position in Northern Ireland relating to electricity is that the balance of Northern Ireland's portfolio of electricity generation has changed over the last decade from being largely oil and coal fired generation towards gas and coal fired generation and increasing amounts of renewables, principally in the form of wind power. It acknowledges that the scale of the challenge ahead is significant particularly as, since 1990, the Northern Ireland economy has doubled in size but carbon dioxide levels, the main greenhouse gas, have remained at roughly 1990 levels. Therefore, it continues, if the current growth rate of the economy is to be sustained and even accelerated, as required by the Economic Vision, enhanced sustainable energy policies will have to be developed if the targeted 25% reduction in greenhouse gas levels by 2025 is to be achieved.

6.6 **GENERAL PLANNING POLICY**

6.6.1 This is set out in a series of Planning Policy Statements (PPS) prepared by the Department of Environment (DoE) for Northern Ireland which are material to decisions on individual planning applications and appeals.

Planning Policy Statement 1: General Principles

6.6.2 This was adopted in 1998 and explains the general principles that the DoE use when carrying out planning functions and controlling development. The document goes on to set out the process of a planning application, including how the Planning Services consult with local Councils, publish information for communities, set sustainable principles, considers good design while rejecting poor design, formulate and coordinate policy and consult with the Regional Development Strategy for Northern Ireland 2025.

- 6.6.3 The Department recognises that it “has the important and positive task of guiding appropriate development to the right places” while protecting the natural and built environment (para. 10). It identifies key themes which underlie the Department’s approach to planning which includes sustainable development, quality development and design.
- 6.6.4 The aim of sustainable development is “to deliver the objective of achieving, now and in the future, economic development to secure higher living standards while protecting and enhancing the environment. The Department’s aim for sustainable development includes:
- plan for the region’s needs for commercial and industrial development, food production, minerals extraction, new homes and other buildings, while respecting environmental objectives;
 - conserve both the archaeological and built heritage and natural resources (including wildlife, landscape, water, soil and air quality), taking particular care to safeguard designations of national and international importance;
 - shape new development patterns in ways which minimise the need to travel;
- 6.6.5 To achieve quality development, the Government has introduced the qualitative initiative in Northern Ireland with the aim of promoting the importance of good design and quality in the built environment. Developers are required to adopt a sensitive and responsive approach by identifying and making positive use of the assets of a site and the characteristics of its surroundings to determine the ultimate form of development. Good design is encouraged and para 17 acknowledges that it can help promote sustainable development, improve the quality of the existing environment, attract business and investment, and reinforce civic pride and a sense of place while helping to secure continued public acceptance of necessary new development.

6.6.6 In considering relevant material matters when determining planning applications, the Department will base its decision on planning applications on planning grounds alone and para. 52 reaffirms that the planning system does not exist to protect the private interests of one person against the activities of another, although private interest may coincide with the public interest in some cases. It continues that “the basic question is not whether owners and occupiers of neighbouring properties would experience financial or other loss from a particular development, but whether the proposal would unacceptably affect amenities and the existing use of land and buildings that ought to be protected in the public interest”.

6.6.7 For major planning applications, para. 54 serves as a reminder that:

“Article 31 of the 1991 Planning Order lays down a special procedure that enables the Department to reserve to itself the final decision on proposals that raise issues of national or regional importance or on cases of particular contentious and sensitive nature”.

6.6.8 The proposed development does raise issues of National or Regional importance given the importance of the poultry industry to Northern Ireland and its contribution to the economy, the level of jobs both directly and indirectly associated with this industry and the contribution that the proposed development can make to the renewable energy requirements for Northern Ireland which would utilise indigenous fuel feed stocks.

Planning Policy Statement 2: Planning and Nature Conservation

6.6.9 This document explains the DoE’s Planning Policy for Nature Conservation for the whole of Northern Ireland recognising that *“if Northern Ireland is to develop in a sustainable way, accommodating economic diversity and conserving its natural heritage, environmental and economic development strategies must be closely integrated and mutually supportive”* (para. 10).

- 6.6.10 The proposed development site is close to Glenavy River and Lough Neagh part of which is an identified ASSI, Special Protection Area and Ramsar site. PPS2 recognises the international obligations and the legislation which impacts upon such areas including the Convention on Wetlands of International Importance (the Ramsar Convention) and the EC Council Directives on the Conservation of Wild Birds (the Birds Directive) including the classification of Special Protection Areas (SPAs) and the Conservation of Natural Habitats and Wild Flora and Fauna, (the Habitats Directive) which give effect to site and species protection measures both by direct designation as a SPA and through the establishment of the Natura 2000 (European Sites) Network. The nearby SPA on Lough Neagh has been selected for its importance as an area of breeding, over wintering and migrating birds and included as one of the Natura 2000 network of sites.
- 6.6.11 PPS2 explains at para. 24 that all Natural 2000 Sites are to be protected from deterioration or damage and that plans or projects likely to have a significant effect on the site must be assessed to decide whether the nature conservation interest would be damaged. It continues that *“if it would, the plan or project can only proceed where there is no alternative solution and where it must be carried out for imperative reasons of overriding public interest”*. In balancing the protection of the ecology and new development, PPS2 explains in para. 27 that there is no intention to exclude human activities from European and Ramsar sites as *“the aim is to ensure that those activities are undertaken in ways which do not harm or threaten the nature conservation interest”* and by *“sensitive consultation it is important to ensure cooperation and commitment to the protection of these areas”*. Therefore, the process for assessing new development which may affect a designated Ramsar site requires the most rigorous examination and consideration will be given to the location, size and significance of the proposed project and the scope and content of the Environmental Assessment which accompanies the proposal (para. 39).

6.6.12 PPS2 also recognises that other sites of potential local nature conservation importance may come to light when countryside assessments are prepared. Woodlands are of importance both as habitats and as a strong visual element creating an attractive landscape. Therefore, paragraph 65 explains that, wherever possible, existing trees, woodlands and important hedgerows would be protected by conditions on the grant of planning permission and opportunities will be taken to secure new tree planting in development schemes. Finally, the Wildlife (Northern Ireland) Order 1985 should be mentioned as this affords protection to wild animals and plants in Northern Ireland in addition to that offered by the planning system. Para. 68 reminds developers that they may be advised that they must conform with any statutory species protection measures affecting the site concerned.

Planning Policy Statement 3: Access, Movement and Parking

6.6.13 PPS3 forms an important element in the integration of transport and land use planning. It promotes more sustainable transport choices, greater accessibility for all and the reduction in the need to travel, especially by the private car. It emphasises that developments should take account of accessibility by all transport modes and that there is a need to mitigate adverse transport impacts and the promotion of road safety which will assist in healthier living and help reduce social exclusion.

6.6.14 PPS3 contains eleven planning policies which replace several transportation policies in the Planning Strategy for Rural Northern Ireland. These will prevail unless there are other overriding policy or material considerations which outweigh them and justify a contrary decision. Of particular relevance to the proposed development is:

Policy AMP6: Transport Assessment – In accordance with this policy, a Transport Assessment has been prepared in order to allow the Department to evaluate the transport implications of the development proposal. The submitted Transport Assessment (TA) reflects the scale of development and

the extent of the transport implications of the proposal concluding that there would only be a modest increase in traffic levels.

Policy AMP7: Car Parking and Servicing Arrangements – Development proposals are required to provide adequate provision for car parking and associated servicing arrangements. The amount of car parking will be determined by the characteristics of the development and its location having regard to the Department’s published standards. There would also be a need to provide a proportion of car parking spaces for people with disabilities. Para. 5.46 recognises that in many locations it will remain important that development makes adequate provision for car parking and this is particularly important in rural areas where the potential for using public transport is limited. Therefore, in areas not subject to parking restraint, new development will generally be expected to meet Department’s parking standards. It is also acknowledged in para. 5.52 that servicing arrangements are important and can exert a major influence on the quality of the environment.

Policy AMP8: Cycle Provision – For new developments providing jobs, it is necessary that the needs of cyclists are taken into account and appropriate provision is required for safe and convenient cycle access and also to existing or programmed cycle networks where they adjoin development sites. An additional requirement is that major employment generating development would be required to make appropriate provision for shower and changing facilities. This would be conveniently located close to cycle parking to encourage and facilitate those who travel to work by bicycle.

Planning Policy Statement 4: Industrial Development

- 6.6.15 This Planning Policy Statement was adopted in March 1997 and supersedes a number of the policies relating to industrial development in “A Planning Strategy for Rural Northern Ireland”. Unlike the Public Consultation Draft of PPS4 which was published in 2003, it does not contain specific planning policies. However, it recognises the importance of inward investment to the creation of small rural

businesses in helping to maintain viable rural communities and the creation of economic diversity in such areas.

6.6.16 The relationship between industrial development and Development Plans is explained in para. 13 and “the Department will not normally zone land for specific purposes within smaller rural settlements unless there is a clear implication of potential demand, or an especially suitable site”. It reaffirms that Development Plans will not normally make provision for industrial development in the countryside outside the development limits of settlements. It is advised that individual businesses should let the Department know of their likely development needs over the Plan period so that provisions can be made for an adequate amount and choice of sites for industry.

6.6.17 The locational requirements of industry are a key factor in the preparation of Development Plans and para. 15 explains that industry has always sought locational advantage in response to various external factors. These factors can include:

- the demands of customers;
- access to raw materials and suppliers;
- access to power suppliers and telecommunication network;
- links with other businesses, particularly those providing specialist services or knowledge;
- water and sewerage infrastructure;
- links with research institutions such as universities;
- workforce catchment areas; and
- transport considerations.

6.6.18 It is evident from the location of the proposed development that many of the above factors have influenced the siting of the proposed biomass fuelled power plant.

6.6.19 In assessing industrial development proposals, PPS4 notes that the characteristics of the industry are continuously changing and that it is not always appropriate to separate industry from rural or residential areas for which they provide employment and services. Para. 29 itemises the criteria for which proposals for the development of land for industrial purposes will be expected to meet. In summary:

- they must be compatible with the character of the surrounding area and adjacent land uses;
- they must not be likely to cause detriment to areas of nature conservation interest and, where possible, should avoid the loss of high grade agricultural land;
- they must not result in significant increase in traffic congestion or be a hazard to road safety; and
- they must not be likely to cause or exacerbate flooding and be capable of dealing satisfactorily with any emission or effluent.

6.6.20 The commissioned reports accompanying the planning application and ES address the above criteria. The conclusions of these reports are that the proposed development will not conflict with the second, third and fourth items - it is compatibility with the character of the surrounding area in terms of landscape and visual impact which is the main issue.

6.6.21 When a proposal is found acceptable, PPS4 requires it to satisfy detailed planning requirements of design, boundary treatment, screening of outside storage, retention of and planting of trees and hedgerows and adequate access, car parking and manoeuvring areas.

6.6.22 PPS4 acknowledges that certain industries involve processes or materials which can result in adverse effects on adjacent land uses or the local environment such as pollution, noise, smell, fumes or dust. Where a proposal may give rise to a

number of possible emissions, it will need to be carefully considered to ensure that the public will not be placed at high risk and paragraph 32 explains that:

“..decisions will be based on the precautionary principle that where there is uncertainty, the protection of the environment will generally be paramount unless there are imperative reasons of overriding public interest. There will be an onus on developers to demonstrate that all relevant factors have been taken into consideration and that the proposal represents the least damaging and most effective solution”.

- 6.6.23 It continues that while potential difficulties can be controlled through non-planning legislation, it is often necessary to seek the advice of experts during the consultation procedures and when a planning permission is granted, conditions will be imposed to minimise or mitigate the impact of development on the environment.
- 6.6.24 Each of the issues of pollution, noise, odour, emissions to air and dust have been investigated as part of the proposal. The investigations conducted have concluded that there will not be an adverse impact upon air quality, with all emissions remaining within European and UK Standards (EALs) and that the proposed development does not present an unacceptable risk to human health.
- 6.6.25 In accordance with paragraph 33, the submitted Environmental Impact Assessment (EIA) for the proposed development considers whether the proposed development is likely to have significant effects on the environment by virtue of such factors as its nature, size and location. The reports and ES conclude that it can be satisfactorily accommodated on the proposed site and is unlikely to cause harm to any sensitive receptor or environmental media. There are gaps in knowledge and recommendations are made for further research and monitoring.

- 6.6.26 Lastly, paragraph 47 considers Major Industrial Projects in the Countryside and it acknowledges that “*some new major industrial projects may require sites outside settlements because of their size or specific site requirements*”. It continues that such projects will be assessed taking account of:
- the contribution of the proposed development to the Northern Ireland economy;
 - the availability of alternative sites; and
 - the environmental effects.
- 6.6.27 Reference was made at the beginning of the section to the Public Consultation Draft on PPS4: Industry, Business and Distribution which was published in 2003. Draft Policy IBD12 considers Major Industrial Development in the Countryside and though the three criteria mentioned in para. 47 of the extant PPS4 remain, there are three additional criteria which include the need to articulate long-term economic benefits of the development, to demonstrate that the development can be successfully integrated into the landscape and building and that the design is of a very high standard.
- 6.6.28 The strong economic and sustainable energy support for this project illustrates the contribution that the proposal makes to the development to the Northern Ireland economy. Alternative sites have been reviewed and having regard to the requirements of a plant of this type and other criteria, it is considered that this is the most suitable site and the only site which is of the right size and available to allow early delivery of the project. There are long term economic benefits, not least in helping sustain and, more particularly, prevent the decline of the poultry industry in Northern Ireland. The indigenous fuel sourced renewable energy will be a significant contribution. Successfully integrating into the landscape, the proposed development is the key issue facing this project.

Planning Policy Statement 6: Planning, Archaeology and the Built Heritage

6.6.29 The importance of industrial heritage is explained and it is against this background that archaeological evidence and its preservation in-situ, and within an appropriate setting, is maintained. Therefore, the Department operates a presumption against proposals which would damage or destroy such remains or which would have an adverse impact on their setting. However, an Archaeological Assessment has not revealed the likely presence of any past settlement or historic activity on the site or the adjoining area to be used as the construction compound.

Draft Planning Policy Statement 14: Sustainable Development in the Countryside

6.6.30 The planning policies contained in this document were referred to on 25 October, 2007, in a Ministerial Statement made by Arlene Foster, Minister of the Environment and it was indicated that they should be accorded substantial weight in the determination of any planning application received after 16 March, 2006.

6.6.31 Draft Policy CTY1 states the presumption against development in the countryside with the exception of a limited number of types of development which are considered in principle to be acceptable. These include:

- Industry and business uses in accordance with PPS4
- Renewable energy projects in accordance with Policy PSU12 of PSRNI.

6.6.32 The justification emphasises that “*it is important to the well being of the rural community to continue to facilitate appropriate economic development opportunities in the countryside*” (para. 4.11) and that “*appropriate industrial and commercial enterprises will be facilitated*” (para. 4.14).

6.6.33 Where development is reliant on non-mains sewerage, draft Policy CTY14 explains that planning permission will only be granted for the development where the applicant can demonstrate that this will not create or add to a pollution problem. It is proposed that the development will have its own on-site sewage

treatment plant and para. 4.113 explains that whether this is acceptable “*will be determined by sub-soil conditions, the sensitivity and capacity of the receiving water course and the vulnerability/sensitivity of water catchment areas*”. It is intended that the treated wastewater and effluent streams will be discharged to the Glenavy River under a Trade Discharge Consent. The discharge will be via a proposed sustainable drainage system and the submitted documentation explains that this would comply with the likely requirements of the discharge consent.

Planning Policy Statement 15: Planning and Flood Risk (June 2006)

- 6.6.34 As much of Northern Ireland is low lying and many rivers and streams have gentle gradients in their lower reaches, flooding from rivers and coastal waters is a natural phenomenon that cannot be entirely prevented.
- 6.6.35 Annex B considers Development and Flood Risk, commenting that new development, whether building works, engineering operations or changes in land use, can increase flood risk. Therefore, it continues, it can also increase direct flood risk in locations beyond the development site by increasing the amount of run-off from the developed area. Similarly, buildings and the construction of other hard surfaces also have the potential to increase down stream flood risk by decreasing flood plain storage and increasing the scale or speed of run-off.
- 6.6.36 Annex C advises on Sustainable Drainage Systems (SuDS) explaining that they seek to manage surface water run-off as near to the source as possible, slowing down run-off, treating it naturally and releasing good quality water to watercourses or groundwater. On the development site, in order to control and attenuate storm water flow, it is proposed to adopt sustainable urban drainage systems which will be achieved by creating a lagoon to accommodate approximately 1,100 m³ of water at the lowest part of the site adjacent to the river, with a controlled discharge into the river.

6.6.37 Annex D assesses Flood Risk and Drainage Impact explaining where the need for an assessment is necessary. In order to assess the potential for the development site to flood in the event of a 1 in 100 year return storm event, a mathematical hydraulic model of a section of the Glenavy River close to the site was developed. The projected rise in river level is below the lowest level of the main development site and below the level of the lowest proposed facility, the SuDS and the attenuation lagoon. The application therefore complies with the requirements of PPS15.

REGIONAL DEVELOPMENT STRATEGY

6.6.38 There are two Regional Development Strategies relating to Northern Ireland. The Rural Northern Ireland was adopted in 1993 and covers all the towns, villages and countryside outside Belfast and Londonderry and the more recent Regional Development Strategy 2025 (RDS) published in 2004.

Planning Strategy for Rural Northern Ireland

6.6.39 Many of the strategic policies have been superseded by the Planning Policy Statements.

6.6.40 Policy PSU12, Renewable Energy, requires the assessment of proposals for renewable energy sources against the need to protect and conserve the environment. In planning for electricity generating installations, the general aim is:

- To ensure that society's needs for energy are satisfied, consistent with protecting the local and global environment;
- To ensure that any environmental damage or loss of amenity caused by energy supply and ancillary activities is minimised; and
- To prevent unnecessary sterilisation of energy resources.

6.6.41 The Policy only refers to the harnessing of wind power and not to other means of securing renewable energy.

- 6.6.42 The Strategy also sets out in Policy GB/CPA1 the establishment of Green Belts where there is a clear presumption against new development apart from a limited number of uses which are, in principle, appropriate to a rural location or there are overriding reasons why that development is essential and could not be located in a town or village or in a part of the countryside not subject to policy constraint.
- 6.6.43 The application has established that the development is essential and could not be located elsewhere so is not contrary to Green Belt Policy.

Shaping our Future: Regional Development Strategy for Northern Ireland 2025

- 6.6.44 The RDS seeks to provide an over-arching strategic planning framework to facilitate and guide the public sector in respect of those elements of their strategies which have a spatial development perspective. Apart from having the fastest improving regional economy in the UK, it acknowledges agriculture has undergone a considerable change over the last 25 years with the introduction of more intensive farming methods, advancing technologies and farm rationalisation leading to increased outputs and a reduction of agricultural employment. It concludes that restructuring and diversification are expected to continue and identifies a number of key regional challenges, industry in relation to the economy, transport and the environment.
- 6.6.45 The strategic planning guidelines for Rural Northern Ireland require a strong, diversified and competitive rural economy which is essential to meet employment needs and wealth within the local economy. The overriding Policy SPG-RNI 1 is to maintain a working countryside with a strong mixed use rural economy. This is implemented in a number of related policies which include:

Policy RNI 1.1 – Sustained and continuing development of a strong agricultural and agri-food sector in order to:

- Maintain a strong core agricultural and food processing industry

- Utilise the environmental and cultural resources of the land in a sensitive and innovative way as a competitive asset for economic development by measures such as:
 - Promoting agri-environmental measures;
 - Promoting good farming practice in relation to the environment;
 - Developing renewable energy sources; and
 - Exploring the potential for research and use of sustainable technology in rural areas.

Policy RNI 1.2:

- facilitate the development of rural industries, business and enterprises in appropriate locations and ensure they are satisfactorily integrated with the settlement or rural landscape:
- Foster indigenous rural businesses that build on the local resources of land and people and ensure maximum local added value;
- Foster rural community projects and facilitate the diversification of the rural economy, generating jobs near local people;
- Facilitate the development of opportunities for growth in employment;
- Build the capacity of the rural community to develop and avail itself of new economic opportunities by facilitating development for appropriate high quality training and skills for the future.

6.6.46 The proposed development site lies within the Green Belt and an Area of High Scenic Value. The RDS contains the strategic planning guidelines for Green Belts which set out the need to conserve the natural environment maintaining strict planning control in rural areas where development pressure is intense. Policy RN1 5.1 seeks to manage the use of rural resources to achieve a more sustainable pattern of development by controlling development in areas, particularly the main commuter zone around BMA where there is pressure for development, by means of green belts, to maintain the rural character and tranquillity of the countryside.

- 6.6.47 In preparing the Strategic Rural Development Objectives and the principles of sustainable development, the RDS acknowledge that the need to sustain rural communities requires new development and employment opportunities which respect local, social and environmental circumstances. It continues that “*in this context the approach set out in SPG-RN1-RN1.5 is to conserve and enhance the environment, whilst improving the quality of the life of the rural communities and developing the rural economy*”.
- 6.6.48 The RDS provides a robust and flexible framework for sustainable regional growth capable of accommodating the future levels of economic activity sought by the Economic Development Strategy 2010 by, *inter alia*.
- Defining a Spatial Development Strategy which identifies a range of development opportunities for job creation across the Region, capable of accommodating emerging and new growth sectors of the economy and suitable for a variety of business sizes; opportunities which are attractive to inward investment and to the creation and expansion of indigenous businesses and community enterprises;
 - Facilitating job creation to tackle disadvantaged and community differentials.
- 6.6.49 It continues that the rural economy including agriculture will continue to play an important and diversified role at the core of the region’s economic and social fabric. Therefore, Policy SPG-ECON1 seeks to promote a balanced spread of economic development opportunities across the Region focussed on Belfast metropolitan area, Londonderry, Craigavon and the urban hub/clusters, and the main centres for employment and services. This is supported by the following policy.

6.6.50 Policy ECON1.4 – Provide flexibility to accommodate major development of a regional or sub-regional significance:

- Facilitate the accommodation of unforeseen imaginative proposals for economic development that are clearly in the public interest, such as unique proposals of significance to the whole or a substantial part of Northern Ireland, subject to the parameters in Appendix 11.

6.6.51 The parameters allow the intention to facilitate development projects in tune with the spirit of the Spatial Development Strategy for the Region:

“This approach should enable the private sector to present a significant development project, or put together a major development package, which meets their entrepreneurial objectives and at the same time delivers wider public resource by providing, for example desirable improvements to regional infrastructure and community services. Such proposals would be a matter for further consideration and judgement through the major planning application process, involving public consultation and environmental, transport and other relevant assessments”.

6.6.52 The strategy also seeks to encourage the wise use and management of environmental resources and, therefore, Policy SPG-ENV5 seeks to respond to the implications of climate change and promote more prudent and efficient use of energy and resources, and effective waste management. The implications of climate change are considered and Policy ENV5.3 promotes restraint of emissions of greenhouse gases by, for example:

- Promoting the use of cleaner and more efficient fossil fuels and the exploitation of renewable sources of energy and alternative energy technologies;

6.6.53 Policy ENV5.4 promotes the Waste Management Strategy for Northern Ireland by working in partnership with industry to create an economy based on sustainable waste management practices, supporting and influencing opportunities for reducing the amount of waste generated.

6.6.54 In conclusion, the implementation of these policies is via the preparation of planning policies and development plans which are consistent with the strategy. Therefore, it states that planning policies and development plans will be in broad harmony with the strategic objectives and policies set out in the strategy subject to any need to take account of emerging trends.

6.7 LOCAL PLANNING POLICY

The Belfast Metropolitan Area Plan (BMAP) 2015 – Draft Plan, November 2004

6.7.1 The Public Inquiry into the draft plan is nearing completion, and when the plan is eventually adopted it will supersede the Belfast Urban Area Plan 2001, adopted in 1989.

Employment

6.7.2 Policy RNI 1.2 facilitates the development of rural industries, businesses and enterprises in appropriate locations. The Plan primarily allocates land for employment purposes seeking to sustain balanced economic growth and job creation. In the Metropolitan Rural Area, where the application site is located, the plan proposals make provision for employment sites in villages, identifying existing employment/industrial land with capacity for further development. There is no policy relating to the development of sites which are not within towns or villages.

Transportation

6.7.3 Policy TRAN1: Public Transport, Walking and Cycling states:

Planning permission will only be granted for development proposals which incorporate, where appropriate, adequate provision for public transport, walking and cycling routes, and measures to ensure access by people with impaired mobility to be agreed with the Department.

6.7.4 The justification seeks to promote realistic alternatives to travelling by private car thereby supporting sustainable development. Development proposals should incorporate provision for public transport and for walking and cycling routes including linkages to the main walking and cycle networks such as Route 94, The Lough Shore Trail, of the National Cycle Trail which circumnavigates Lough Neagh and passes the rear of the site along part of Ballyvannon Road and Ingrams Road.

Natural Environment

6.7.5 The BMAP Natural Environment Strategy comprises the following elements:

- Protection of areas designated for their international and national conservation importance;
- Protection and enhancement of biodiversity through protecting priority habitats identified in the Northern Ireland Biodiversity Strategy;
- Protection of local wildlife and natural features by designating Sites of Local Nature Conservation Importance (SLNCIs); and
- Designation of Local Landscape Policy Areas (LLPAs) to protect those features considered of great importance to the identity and local landscape settings.

6.7.6 The justification refers to Lough Neagh which has been designated for its national importance as an Area of Special Scientific Interest (ASSI), international importance as a Special Protection Area (SPA) and RAMSAR site. Outside the

designated areas, further protection is afforded to features of the natural environment which are of importance to wild flora and fauna.

6.7.7 Policy ENV1, Protection of Biodiversity states:

Planning permission will not be granted for development where there is potential for damage or harm to the integrity, continuity, links or ecological relationships of those habitats and species which are identified as priorities in the Northern Ireland Biodiversity Strategy, or are otherwise of major importance for flora and fauna.

6.7.8 In some circumstances, a Planning Agreement may be required with the developer in order to reduce, offset or compensate for any of the effects of the development by the provision of new or enhanced habitats or features or their improved management. A study of the site and surroundings to assess its flora and fauna concluded that it is grazing land with no protected or rare plant species found on the site or nearby.

6.7.9 Policy ENV2, Sites of Local Nature Conservation Importance, requires that planning permission will not be granted for a development that would be liable to have an adverse effect on the nature conservation interest of a designated Site of Local Nature Conservation Importance.

6.7.10 Glenavy River is a designated *salmonid* river and the stretch of river to the north of the site is an identified SLNCI. The submitted Environmental Statement and reports have concluded that disposal via the river of treated temperature attenuated waste water within the proposed parameters would be unlikely to cause harm except in extremely low flow rates; recommendations for further mitigation are made. Similarly, it is concluded that there is less likelihood to be an adverse impact upon the Lough.

Countryside

6.7.11 The proposed development site lies within the Green Belt and an Area of High Scenic Value. The RDS contains the Strategic Planning Guidelines for Green Belts which set out in Policy SPG-ENV1 the need to conserve the natural environment by:

“protecting, enhancing and encouraging appreciation of the Region’s landscapes, one element of which is to manage development pressures to protect the setting of settlements and maintain the rural character of the countryside throughout Northern Ireland by designating Green Belts.... (ENV1.4)”.

6.7.12 Designation COU1, BMAP Green Belt (Revised), includes in Map No1, the Lisburn Countryside, where the Department considers that it is appropriate and necessary to maintain strict planning control in rural areas where development pressure is intense.

6.7.13 Areas of High Scenic Value (AHSV) are designated to protect the setting of the Metropolitan Urban Area and other areas of particular landscape merit. It includes Portmore Lough (ref 6/06) which extends to cover at its periphery the proposed site. Policy COU7 states:

“Planning permission will not be granted to development proposals that would adversely affect the quality, character and features of interest in Areas of High Scenic Value. Proposals for mineral working and waste disposal will not be acceptable. A Landscape Analysis must accompany the development proposals in these areas to indicate the likely effects of the proposal on the landscape”.

6.7.14 In such areas, all proposals will be assessed against prevailing regional policies in the Green Belt and how they will conserve and enhance the landscape of the AHSV. Regard will be had to the siting, massing, scale and design, materials, finishes and landscaping of development proposals in order to ensure that it will integrate well into the topography and landscape and respect the scale of, and materials used in, existing vernacular buildings in the surrounding area.

6.7.15 As referred to earlier, impact upon the landscape is the key issue facing this proposed development and, specifically in terms of the countryside policies of the draft BMAP, its location within the AHSV and Green Belt. It is conflict with these policies which needs to be weighed against the wider economic and sustainable policies. It is submitted that the mitigation measures proposed to ameliorate the impact upon the landscape and visual amenity will assist in assimilating the proposed development, in the same way that the adjoining UFBP plant has been assimilated, but that there will be a persisting impact due to the scale of the development but those objections are outweighed by the economic and sustainable policies which support this vital project.

Public Services and Utilities

6.7.16 The BMAP Public Services and Utilities Strategy comprises the following elements:

- To facilitate the delivery of the infrastructure requirements of the Plan Area throughout the plan period; and
- To highlight infrastructure constraints and requirements as appropriate within Key Site Requirements.

6.7.17 There are no specific policies relating to water and sewerage, drainage or waste disposal. It notes that water from Lough Neagh is delivered to the Plan Area via Dunore Water Treatment Works just outside Antrim and that currently there are many appraisal studies ongoing within the Plan Area. The Rivers Agency is the statutory drainage and flood protection authority; it reinforces the Government

wish to promote a move to Sustainable Urban Drainage Systems (SUDS) as these provide a number of options for draining an area.

- 6.7.18 Under Waste Disposal, the Plan notes that the six Councils in the Plan Area form part of a larger group of 11 Councils in the eastern part of Northern Ireland which have come together to form ARC21, the sub-regional waste planning body. ARC21 Waste Management Plan, prepared under Article 23 of the Waste and Contaminated Land (NI) Order 1997 and adopted by the constituent Councils in 2003, identifies the key elements in a sub-regional network of facilities required to recycle, reuse and recover resources from our waste. It acknowledges that waste management presents land use planning with a number of short term problems in terms of the need for a large number of new facilities, new types of facility and the need for flexibility in seeking to accommodate new technologies and pilot schemes.
- 6.7.19 Finally, it recognises that NIE will continue to develop the existing 33kV and 11kV distribution networks in order to meet customer requirements and demand change during the plan period. The existing 33kV, 11kV and 6.6kV circuits within the Plan Area are currently being reinforced. The proposed development will contribute to the future needs of the area.

District Proposals: Lisburn

- 6.7.20 This section of BMAP identifies the sites which are allocated under the policies contained in the RDS and the Plan Strategy and Framework for the Belfast Metropolitan Area Plan 2015. The area has experienced significant population growth during the past 30 years with an increase of over 50% between 1971 and 2001 largely due to suburban expansion. Due to its locational advantages and the rapid growth experienced in the district, the report acknowledges that the Lisburn area is subject to continuous pressure for housing and industrial development. The Spatial Development for the BMAP and its hinterland creates a major area of planned lateral expansion on the key transport corridor at Lisburn.

6.7.21 Lastly, it recognises Lisburn's attractive setting with its different landscapes, international designations and the Green Belt which protects areas of countryside that are experiencing development pressure.

7. ENVIRONMENTAL BENEFITS

7.1 There are direct environmental benefits which will result from the proposed development of the poultry bedding and meat and bone meal fuelled power plant.

These can be summarised as:

- Reduction of excess nutrients application to land
- Water quality improvement
- Renewable energy
- Reduction of greenhouse emissions
- Fuel – import substitution
- Reduction in need for temporary storage facilities for poultry litter
- Odour minimisation
- Destruction of pathogens

Excess Nutrients – Nitrogen and Phosphorus

7.2 The section on BPEO details the research reviews of the problem of excess nitrates and phosphorus fertiliser/manure application in the light of the Nitrates Directive. In their review, the Expert Group on the Alternative Use of Manures (EGAUM) estimated in 2005 the excess of nitrogen and phosphorus over the nutrient needs for crops, including grass, in Northern Ireland. For nitrogen, the excess was based upon the 170kg N/ha limit of applied fertiliser, in whatever form, per annum. It was calculated that the excess nitrogen overall amounted to 123kg N/ha, most of this being represented by the top 25% of farms (by size). In terms of sector, 45% of all poultry farms have an excess of nitrogen and when reviewed in terms of spatial distribution the areas around Dungannon and Ballymena, both centres of poultry production, were found to be the areas where there were the highest levels of excess nitrogen produced on farms (within a 15km radius of the towns). The SNIFFER report estimated that to comply with the Directive over 37,000ha of land which is not subject to other manure spreading would be required.

- 7.3 In respect of phosphorus, it is already recognised that there is a high loading of this nutrient within the soils of Northern Ireland. The assumed limit for additional phosphorus was set at 6kg P/ha per annum. The excess phosphorus was calculated at 28kg P/ha, over four times the assumed limit level – other reports suggest excess phosphorus of half that amount but still representing a considerable excess over the nutrient needs for crops in Northern Ireland. Again, 45% of poultry farms were found to be in excess, with virtually all this being produced by large poultry farms (top 25%), reflecting the nature of the industry.
- 7.4 This quantitative assessment reflects the excess of poultry litter derived nutrients which need to be disposed of – they cannot be land spread if either the Nitrates Directive or Phosphorus Regulations are to be complied with or the environmental benefits achieved.
- 7.5 Analysis of samples of poultry bedding has been carried out on behalf of Rose Energy. This has indicated that based upon the constituent proportions of nitrogen and phosphorus, the combustion of 220,000 tonnes per annum as a fuel in the proposed power plant would remove approximately 4,200 tonnes of nitrogen and 5,200 tonnes of phosphorus. The proposed biomass fuelled power plant represents, therefore, a real solution to the problem of excess nitrogen and phosphorus in Northern Ireland resulting from the agricultural sector. None of the other potential methods or techniques of dealing with poultry bedding achieve this except where the nutrients can be effectively exported to countries which do not have a similar problem.

Water Quality Improvement

- 7.6 The Minister for the Environment recently announced the first State of the Environment Report for Northern Ireland. Launching the document “*Our Environment, Our Heritage, Our Future*” on 9 April, 2008, the Minister drew attention to the importance of both celebrating the state of much of Northern Ireland’s environment and also addressing the significant weaknesses. The build-

up of excessive nutrient levels in rivers and lakes is one of the specific problems highlighted in the report announced by the Minister, with one of the causes of the phenomenon of eutrophication being identified as run-off from farm land of fertilisers and animal wastes which seep into streams and rivers.

- 7.7 The aim of the Nitrates Directive, together with the Water Framework Directive, is the protection and indeed improvement of our water resources. As noted in three of the supporting documents to the Environmental Statement³, the problems of eutrophication were partially stabilised by works undertaken at sewage treatment plants which were disposing of treated effluent into Lough Neagh. However, excess loading of agricultural manures and fertilisers on lands which drain to the Lough have perpetuated high levels of eutrophication with the problems which that poses for water quality, bio-diversity, habitat protection and adverse visual impact.
- 7.8 Improvements in water quality and of the other existing adverse effects of excess nitrates and phosphorus will not occur overnight, though the fact that phosphorus is more quickly lost to waters by run-off rather than leachate may effect an improvement in that respect sooner rather than later. The actions to reduce nutrient enrichment are not aimed, however, just at those water bodies which are already eutrophic but also those which potentially may become eutrophic. This protection of existing non-eutrophied water bodies and habitats, including their visual appearance, as well as a programme of action to reverse the eutrophication of existing water bodies such as Lough Neagh can only be achieved by the reduction in nutrient loading on land. The proposed development will assist in the achievement of this goal.

³ Assessment of Impact on the Aquatic Ecology of the Glenavy River and Lough Neagh of the proposed Rose Energy development, Dr. Chris Harrod, April, 2008; Fisheries Impact Assessment, Paul Johnston Associates, March, 2008; Rose Energy Project : Lough Neagh Desktop Review, Marengo Environmental Consultants, August, 2007

Renewable Energy

- 7.9 Mass incineration is a solution used by some waste authorities, notably in England, for the disposal of municipal waste in lieu of landfill. Not only is this a basic means of disposal, and effectively no higher up the waste hierarchy than landfill itself, but it would not be a viable solution for the poultry industry - the energy from combustion of poultry bedding and MBM can be usefully harvested to supply electricity to the Northern Ireland grid.
- 7.10 Northern Ireland needs to meet its obligations to generate more renewable energy, with 15% to be non-wind derived electricity generation. It is estimated that the proposed 30MWe power plant, exporting approximately 25MWe to the grid, will contribute 40% of the non-wind derived renewable energy target for 2012.
- 7.11 Meeting a renewable energy target is not an end in itself. The purpose is to reduce greenhouse gas emissions to combat climate change.

Reducing Greenhouse Gases

- 7.12 One of the other major issues introduced by the Minister for the Environment in the State of the Environment Report for Northern Ireland, is the significant weakness that greenhouse gas emissions are not yet falling fast enough and, indeed, the evidence for decline is currently weak. The report refers to the Northern Ireland Sustainable Development Strategy and the target for a reduction of 25% below 1990 levels of the greenhouse gases which contribute to global warming by 2025, and a 30% reduction below 1990 levels in carbon dioxide emissions. Agriculture is noted as the third largest contributor to greenhouse gas emissions because of the huge quantity of methane produced by cattle, methane having a much more powerful effect than carbon dioxide on global warming. The Chapter on Carbon Footprint in the Environmental Statement refers to this issue and the large amount of methane produced as a result of land spreading of poultry bedding.

7.13 The proposed power plant at Glenavy will achieve a real reduction in greenhouse emissions. This will be due to both the nature of the different means of disposal or use – combustion as a fuel as against land spread – and from the reduction in transportation of MBM. The overall reduction in carbon dioxide, or equivalent emissions, is estimated at over 172,500 tonnes of CO₂ per year (see Carbon Footprint Chapter in the Environmental Statement).

Fuel – Import Substitution

7.14 Northern Ireland has been reliant upon imported fuel for power generation. Though there is some indigenous fossil fuel, in the form of lignite, it has not been exploited. As a consequence, not only is Northern Ireland susceptible to the variability of costs of all imported fuels but also the transportation costs increase ultimate fuel prices, which are significantly higher than in other parts of the United Kingdom.

7.15 Reliance upon imported fuel has also contributed to the location of power plants. The two main power plants in Northern Ireland are Kilroot and the Ballylumford plant opposite the port of Larne. Both are located by the sea not only for large levels of water abstraction for water cooling but also to facilitate direct offloading of fuel (coal and gas) from ships in the case of the Kilroot plant and start up/back up fuel oil for the gas powered Ballylumford plant.

7.16 The DETI policy document, Energy: A Strategic Framework for Northern Ireland, June 2004, notes amongst others the main challenges of

- narrowing the differential between electricity prices in Northern Ireland and other regions of the UK and the EU,
- reducing emissions by securing the most efficiency from power generation and by reducing the demand for energy, and
- increasing the use of renewable energy for heat and power generation. To help achieve those challenges four goals have been set which include

protecting the future by enhancing the sustainability of the energy supply and consumption, and maintaining the reliability of energy supplies.

- 7.17 One of the means of addressing these challenges is via the Government's intention to promote the development of indigenous renewable energy generation – indeed, the Energy policy statement is seeking to promote indigenous renewable energy generation “*to the extent that it will be capable of providing 12% of the electricity consumed by 2012...*”. This is not being achieved at present and a significant element of renewable energy supplied in Northern Ireland is reliant upon imported renewable energy sources.
- 7.18 The proposed bio-mass power plant has the potential for direct import substitution of fossil fuel. The bio-mass of poultry bedding and meat and bone meal is an indigenous product from the agricultural sector of Northern Ireland. It is renewable, is a sustainable source, with security of supply, and requires relatively little transport.
- 7.19 DARD introduced the Farm Nutrient Management Scheme (FNMS) to provide financial assistance to farmers who are installing facilities to increase storage capacity for farm manures produced within the farm. The aim of the scheme was to assist with compliance with the Nitrates Action Programme, implementing the Nitrates Directive, and subsequent Regulations introduced in Northern Ireland. The scheme is now closed to further applications for grant assistance.
- 7.20 Via the FNMS it is possible to gauge the extent of capital costs involved in simply providing physical facilities for storing farm manures produced on a farm for the closed period for manure and fertiliser application which will bite in full in 2009. This has been calculated at over £200m for the livestock industry as a whole in Northern Ireland.
- 7.21 The poultry industry has not been strongly involved in taking up the potential grants as the proposed power plant project will resolve the problem and preclude

the necessity for temporary storage. However, if the current arrangement which effectively allows for temporary field storage comes to an end, and it is understood that this will be the case later in the year, then the poultry industry will be faced with the need for substantial storage facilities. Whether grant assistance may become available again or not, this would represent a very considerable capital cost to the industry, possibly equivalent to if not in excess of the total profits of the industry in Northern Ireland.

- 7.22 Storage facilities cannot be in close proximity to the main producing areas of poultry, due to the need for bio-security and the stores would need to be centralised and substantial and would give rise to odour. In terms of capital cost the proposed power plant scheme at Glenavy would remove or at least reduce the need for such storage facilities.

Odour Minimisation

- 7.23 When poultry bedding is land spread, it decomposes with the application of water and air and releases methane, which is odorous. As noted in the Carbon Footprint chapter in the Environmental Statement, methane is a significant greenhouse gas and the assessed quantity emitted as a result of land spreading 220,000 Te of poultry bedding, together with nitrous oxide which is another greenhouse gas, amounts to 341,788 tonnes per annum, not including the emissions arising from the transportation of the poultry bedding to fields for spreading and the effort of spreading the material itself.

- 7.24 Based upon the known nitrogen content of poultry bedding, and using the spreading limitation of 170kg n/ha per annum, 220,000Te of material requires over 24,700 hectares of land. This is a sizeable area from which odour nuisance will arise as the poultry bedding decomposes and releases methane. This will not occur with the proposed plant, which would take the dry poultry material in enclosed trucks for temporary storage (no more than 4 days in total) at the proposed power plant before incineration. As detailed in the Environmental

Statement, little odour is expected by using freshly collected poultry bedding which is dry and kept dry throughout its transport from the point of production to where it will be used in a proposed power plant.

Destruction of Pathogens

7.25 The current process of disposal of poultry litter by land spread involves risks in the dissemination of animal pathogens. There are a number of pathogens present in faecal waste including infectious bursal disease and infectious bronchitis. Eliminating land spreading will lead to a much reduced potential for pathogens to be spread through the environment and on a national scale this will greatly lower the disease challenge faced by livestock farmers. As noted in the section on Review of Sites within the Environmental Statement, siting a proposed power plant away from clusters of poultry sheds is important in terms of bio-security and the current practice of land spreading is illustrative of the risks which currently exist to the industry, and potentially to those who come in contact with this agricultural waste.

Conclusion

7.26 There are considerable environmental benefits which will be derived from the proposal to use poultry bedding as a fuel. Additionally, the ability to utilise up to 40,000Te of meat and bone meal, primarily and potentially exclusively supplied from the adjoining rendering plant of Ulster Farm, will also provide significant environmental and cost benefits in reduced transport. These benefits need to be assessed in the policy context and in the light of the detailed impact considerations arising from the proposed location of the plant.

8. CASE FOR THE DEVELOPMENT

8.1 Poultry bedding and meat and bone meal have both been traditionally used in various ways and for beneficial purposes, particularly in relation to agriculture. However, the uses and outlets for those materials have changed and are changing, and notably so currently in respect of poultry bedding. In considering the proposed development, the following issues need to be addressed:

- Is there a need for this development?
- Is this the right technology?
- Why this site?
- The policy balance to be struck.

Need

8.2 The previous section on Best Practical Environmental Option and Need (Chapter 5) details the evolution of the proposed development and, in particular, the three separate and independent reviews of the problem of a surfeit of poultry bedding. Those reviews were preceded by the DOE-DARD scientific working group's Report on the Environmental Aspects of the Nitrates Directive in Northern Ireland, August 2002. All of these four reviews and reports confirm there is a serious problem to address.

8.3 While the reviews of the "problem" has come out of the regulatory requirements initiated by the Nitrates Directive, or impending Directive in respect of the DOE-DARD 2002 report, the real issue behind them is that water resources are deteriorating, adding risks to human health, because of the excess of nutrients which are flowing or percolating into the groundwater or water bodies. The primary aim of the Directive and subsequent Regulations, now bolstered by the Framework Directive on Water, is to improve water quality. The other benefits are referred to in the preceding Chapter 7, Environmental Benefits, which includes

the risk to bio-diversity resulting from past practices and which will increase if it is perpetuated.

- 8.4 In both actual and regulatory terms there is a need to address a pressing problem. That problem could be addressed by simply running down much of the livestock industry of Northern Ireland and indeed elsewhere in the UK and Europe. For Northern Ireland, where most pig and poultry farmers do not have land available to them for spreading livestock manures, the problem is most acute. Simply running down these industries is not a tenable project involving not only the loss of a very substantial number of jobs – (in the poultry sector 6,000 directly and a further 2,500 indirectly) but also the contribution that the industry makes to the economy both directly and via the substantial multiplier effect of the wages paid to the people employed.
- 8.5 The open letter Cirrus Plastics (see PS4) illustrates the importance of the poultry industry to other businesses and the employment they provide. As the author of the letter states, there are 35 full time jobs in that packaging business which are dependent upon a continued, viable poultry industry.
- 8.6 There is an overwhelming need, therefore, to find a solution which is affirmed by four separate, independent reports. The solution must allow the industry to not only to maintain itself but prosper while complying with the Environmental Regulations and, indeed, contributing to an improvement in the environment in terms of water quality, the maintenance of existing aquatic habitats and the improvement of those which are already degenerated due to eutrophication and visual improvements with the cessation or at least limitation of algae blooms.

The Proposed Solution

- 8.7 As referred to in the previous section on BPEO and Need, the three independent and separate reports which have reviewed both the problem and how it may be solved have come to the same conclusion. The solution requires not only that it be

technically appropriate, and result in the ultimate goal of not only dealing with the large amount of poultry litter but also removing the excess nutrients which other possible technical solutions do not do as the nutrients remain in residues, but also that it must be a viable solution.

- The NI Invest supported report on behalf of the consortium of poultry producers recommended a chicken litter fired power plant ;
- The recommendation of the poultry producers' study was incorporated in the considerations of and reviewed by the expert group (EGAUM). The expert group endorsed the recommendation for a single poultry litter fired power plant capable of handling 300,000 tonnes of input per annum and producing up to 25 MW of power as the appropriate solution for dealing with the material and which would accord with the UK's response to the need for urgent action upon climate change and in particular be a major contribution to meeting the Renewable Obligations target for Northern Ireland. The then Minister endorsed this approach.
- The EHS commissioned report from SNIFFER, published in May 2005, came to the same view earlier than the recommendation by EGAUM, citing the problem of manure management and its acuteness in Northern Ireland, the lack of land of low nutrient status to accommodate it and the particular difficulties where there are geographic concentrations of intensive livestock production, such as poultry units. They noted that almost all broiler litter in Scotland is combusted in power plants and recommended that it be adopted "*...as an alternative utilisation for almost all litter produced in Northern Ireland, as it currently is in Scotland*".

8.8 The EGAUM recommendation by the scientific working groups report. That report from the Global Research Unit, was the outcome of over two and half years work, reporting in December 2005, which reviewed the technical solutions for dealing with different manures and also the viability of different solutions and the markets for the ultimate output of those particular technical solutions. Different

solutions are proposed for different types of manures, with anaerobic digestion being proposed for dealing with pig slurry. This is not, however, the appropriate means of dealing with poultry litter which as 60% dry matter would need to be reduced to only 3% to make it usable within an AD plant and then not resolve the ultimate problem of dealing with the residue of such plants and the excess nutrients which would remain in the residue – AD plants do not remove the excess N and P.

8.9 It can be concluded that with the unanimous support of three independent reports underpinned by specific research, that the technical solution for dealing with the problem of poultry manures is to use it as a fuel in a power plant. This approach is the optimum solution in terms of the waste hierarchy given that one cannot “reduce” this waste stream without diminishing the size of the poultry industry, nor can it be recycled without either non-compliance with the Nitrates Regulations and the limitations on the application of phosphorus or its shipment to parts of the world where this problem does not exist or would not be created by applying excess fertiliser as has happened in Northern Ireland and extensively elsewhere in the UK and Europe. Landfilling is not a solution either, with the limitations under the Landfill Directive and the escalating costs of landfill – including the Landfill Tax, which is currently £32 per tonne escalating to £48 per tonne in 2010 – making that option wholly unviable. Deriving energy from this waste stream is, therefore, the optimum solution.

8.10 The approach adopted and the proposed development, accords with the aims of PPS11: Planning and Waste Management, in driving the treatment of waste up the waste hierarchy. The PPS recognises the value of energy recovery from waste streams.

Concise View of DARD

8.11 In February 2007, in response to an initial letter from GBPP Ltd to Dr George McIlroy, formerly the Chief Scientific Officer of DARD and who became the Chief Executive of the Agri-Food Biosciences Institute, the Director of Policy and

Economics of DARD wrote outlining the current position with respect the Nitrates Action Programme and the problems faced by the poultry industry, amongst others of the agricultural community, and the policy response from the Government. The full response is provided in the letter appended as part of the Consultation Statement. The letter of 15 February, 2007, concisely outlines the problems facing the poultry industry, together with other parts of the agricultural community, and the policy response of the Government together with noting the contribution that a poultry bedding fuelled power station could provide to resolving the problem and contributing the renewable energy needs of Northern Ireland.

8.12 The response from the Director of Policy and Economics, DARD, refers to the “strategic approach of the development of sustainable energy systems at rural community level” contained within the 2002 report, “Vision for the Future of the Agri-Food Industry” and the subsequent DARD Renewable Energy Action Plan of January 2007. The overall theme of this latter document is to promote the opportunities afforded by sustainable development of renewable energy in Agri-Food and Forestry sectors and the wider rural economy.

8.13 The letter states:

“Activities which contribute to improving the uptake of renewable energy technologies and supporting alternative, sustainable, commercial solutions to dealing with waste management problems for the intensive livestock and food processing sectors in Northern Ireland are vital. This will underpin the economic viability of key agri-food sectors in the face of forthcoming stringent environmental restrictions and also advance the objectives of the DETI led Environment and Renewable Energy Fund.”

After outlining The Nitrates Action Programme Regulations and the restrictions and particular problems with excess phosphorus, the letter goes on to state:

“The phosphorus limits are subject to review at the end of 2008. This timescale was negotiated with the EU Commission to allow time for projects on alternatives to landspreading of organic manures to progress, in recognition of the contribution such projects could make to reducing phosphorus loadings. A poultry litter fired generating facility would be a significant step in reducing the Northern Ireland phosphorus surplus and the need for further controls on organic phosphorus...”

“A litter fired generator could reduce or remove the need to store poultry litter over the ‘closed period’ and therefore save significant expenditure on storage facilities. In recognition of this, the EU Commission agreed to allow the field storage of poultry litter on a temporary basis. This concession will be reviewed at the end of 2008, along with phosphorus controls.”

The letter concludes:

*“If progress has not been made on alternatives to landspreading of manures by the end of 2008, further Action Programme restrictions on organic phosphorus and investment in storage facilities for poultry litter may be necessary. **This would have major cost implications, with a consequent impact on economic viability and employment. A poultry litter fired generator could, therefore, make a major contribution to ensuring Northern Ireland’s compliance with the Nitrates Directive and a sustainable agriculture industry**”.* (Our emphasis)

- 8.14 It is noteworthy that the cost of temporary on-farm storage for manures from livestock, other than the poultry industry, is in excess of £200 million, 60% of which has been supported by Government grant. The poultry industry did not avail itself of this potential grant of support – and the scheme is now closed – in recognition that the proposed poultry litter fired generating plant would be the appropriate solution. To provide on-farm storage for the poultry industry would

therefore have to be wholly supported by the industry itself and would also raise the problem with bio-security which would mean that such storage facilities would probably need to be centralised away from the main centres of poultry production. The bio-security note attached as an appendix to the Environmental Statement illustrates the cleaning regimes which are undertaken following the ending of a crop cycle and removal of litter and before restocking; this would be compromised by retaining large amounts of poultry litter on site, assuming that the poultry farms have the land to build such facilities in any event.

Renewable Energy

- 8.15 The letter from the Director of Policy and Economics concentrates on the agricultural aspects of the problem of excess nutrients and proposed solution but refers at the beginning to DARD's response to the development of sustainable energy systems at rural community level. The proposed development does not just meet those strategic objectives but also the wider ones which are referred to in detail in the section on Northern Ireland Energy Policy in the earlier chapter on Policy (see section 5.3). The DETI document of June 2004, Energy: A Strategic Framework for Northern Ireland, provides the overall framework and need for making electricity prices in Northern Ireland more compatible with those elsewhere in the UK and the EU, a balance of fuel diversity with costs and security of supply, and also increasing the use of renewable energy for heat and power generation.
- 8.16 Planning Policy Statement 18, Renewable Energy, is a consultation draft and must, thus, be treated accordingly but as the culmination of a number of different reports, and reflecting similar sentiments as the PPS applicable in England and that in Wales as well, it is a proper reflection of the Government's Planning Policy for development and the control of development for the generation of renewable

energy. The proposed development accords with the stated primary aim of draft PPS18 which is:

“encouraging and facilitating the provision and citing of renewable energy generating facilities in appropriate locations within the built and natural environment”.

- 8.17 Draft PPS18 also recognises the utility of poultry litter as a fuel source, it being a good fuel for electricity generation and that when used in combustion in place of fossil fuels, a net reduction in carbon emissions is achieved. Again, the proposed development meets this and the section on Carbon Footprint in the Environmental Statement (Chapter 17) demonstrates the reduction in CO₂ emissions that will result from combusting poultry bedding rather than spreading it on the land together with the additional reductions in carbon dioxide emissions in substitution for fossil fuels; it should also be noted that this is an indigenous fuel source which is an important consideration in the context of Northern Ireland and the almost total dependence upon imported energy feedstocks.
- 8.18 In conclusion, the proposed development does not only provide the agreed and supported technical solution but also complies with existing and emerging policy in support of renewable energy, making best use of agricultural resources for use in renewable energy, driving the use of waste streams up the waste hierarchy and utilising an indigenous fuel which used in combustion results in net reductions in CO₂ emissions and more so taking into account fossil fuel substitution. In this last respect, it should also be noted that the meat and bone meal which is proposed to be combined with the poultry bedding for use as a fuel is already being combusted and used for energy generation in England, Scotland and Wales and it is better that Northern Ireland benefits from the energy to be derived from that material, than it be exported elsewhere.

Why Glenavy?

8.19 The separate report, “Review of Sites for Biomass Fuelled Power Plant” details the approach undertaken for reviewing sites for the proposed development. While that report refers to allocations with a Development Plan as one of the criteria in the initial trawl for sites, it does not detail wider policy considerations, which are referred to below.

8.20 The choice of Glenavy of the site for the proposed development can be summarised as follows:

- The principle of developing an energy from waste plant has been established at this location
- Bio-Security – it is set apart from the main concentrations of poultry production
- It is available
- Water for cooling is available
- It is of the right size with sufficient space to facilitate the construction of the plant
- It is immediately adjacent to the single largest source of fuel.

Principle of this form of development

8.21 In June 2001, planning permission was granted for a meat and bone meal burning plant, with energy recovery, within the site of Ulster Farm, adjacent to the application site. That plant was originally proposed to deal with meat and bone meal derived from the Over Thirty Months Scheme which was a market invention scheme, with the benefit of bio-security as well, for the disposal of that material.

8.22 The planning application was considered over a lengthy period of time - some three years – which included the opportunity to review not only the principle of such a plant which was only the second such development in Northern Ireland, the other being the water treatment sludge incineration plant in Belfast, but also

allowed for the environmental impact of emissions from such a plant to be fully reviewed. That included specific toxicity tests on fish, eels and milk derived from cattle grazing in the locality which provided a baseline which illustrated no raised levels of toxicity.

- 8.23 The proposed plant was also to have a tall chimney at over 42m and would have involved additional traffic on the roads as the material to feed that plant was to be imported from the rendering plant at Lisburn. While this planning permission does not establish a precedent, and it was for a plant taking 10% of the volume of material proposed for the Rose Energy scheme, the principles of an energy from waste plant were reviewed several years ago and the location at the Ulster Farm plant at Glenavy found to be acceptable.

Bio-security

- 8.24 This is an issue which has become more important with the heightened threat of Avian Influenza and Newcastle Disease in poultry and other diseases in other livestock. The regulatory regime, referred to in the Review of Sites Report, places potential restrictions on movements within 10km of the location of an outbreak or suspected outbreak and stringent movement restrictions within 3km of any such outbreak or suspected outbreak on a notifiable disease.
- 8.25 There is no commercial poultry producer within 3km of the site at Glenavy and there are a limited number (7) of producers within 10km. This is important in respect of not only the regulations but the operation of a proposed power plant which will have a store of 4 days' operational supply of poultry litter on site – any interruption to the flow of supplies will jeopardise the operation of the plant. A location within or close to the main clusters of poultry producers around Dungannon and Ballymena would potentially jeopardise the operation of the plant as well as creating a bio-security risk for poultry producers.

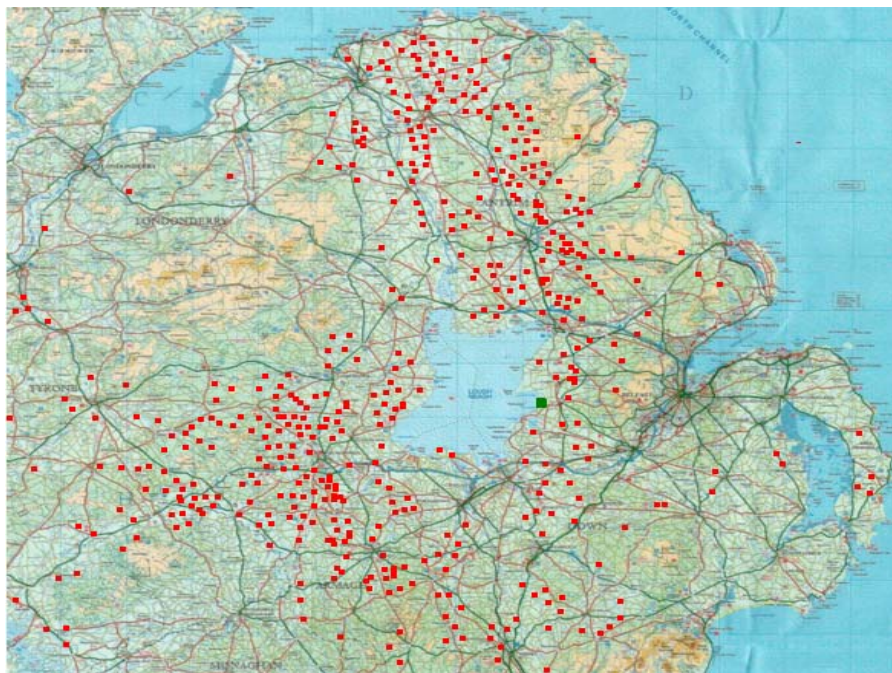
Water for cooling is available


- 8.26 The proposed plant is to be cooled using evaporative cooling, and thus the proposal for cooling towers. This was not, however, the original proposal which was to employ water cooling by extracting a substantial amount of water from a large body of water for cooling and returning it to that large body of water which would act as a “sink” to absorb the then heated water. When the site search was initially undertaken what was required was a site where there would be a large body of water which could only be either the sea or a lake such as Lough Neagh as the requirement is to extract between 4,000m³ and 6,000m³ of water per hour and return it. Given the nature of much of the coast of Northern Ireland, and in particular that section of the North Coast which is within an Area of Outstanding Natural Beauty and with challenging topography, Belfast Lough and Lough Neagh were identified as locations where the potential for obtaining a large amount of water and returning it is possible.
- 8.27 As explained in the Review Report, the design of the proposed plant changed to accommodate evaporative water cooling, though the potential for using the closed loop system and large volumes of water for cooling is still being investigated. The evaporative cooling design still requires a substantial amount of water (approximately 160m³ per hour) as an appropriate means of disposal of surplus water and effluent (in excess of 60m³ per hour) and therefore a site with access to a sufficient source of water and means of disposal is still required.
- 8.28 The change in the proposed design of the plant came later on in the process when it became clear that currently it is not possible to demonstrate that abstracting a large amount of water from Lough Neagh and returning that water to the Lough but at an elevated temperature would represent Best Available Technique for the purposes of obtaining an IPPC Permit, nor that there would be unacceptable environmental impact under the EIA process without further and potentially lengthy research work. However, the requirement for a site with access to a substantial supply of water, which can be obtained at Glenavy, remains but which is absent at other potential sites.

Proximity to largest source of fuel



8.29 The Ulster Farm plant adjacent to the site is the single largest source of fuel. Meat and bone meal from Ulster Farm can be conveyed directly to the proposed plant, currently proposed by goods vehicles, rather than shipping it off site and exporting it to England, Scotland and Wales where it is used in power plants and cement kilns. There is no other site which can provide such an immediate benefit. Few of the poultry farms produce more than 500 tonnes of litter per year and then only intermittently throughout the year when sheds are cleared out after a cropping cycle.

8.30 The proximity to where the fuel source arises is referred to in draft PPS18 which indicates that it is generally preferable to locate the proposed renewable energy plant at the centre of gravity of the proposed feedstock. The site of the proposed development next to the single largest source of fuel accords with the sentiment expressed in the consultation draft PPS. As is illustrated in the Figure below, the site is well located to accept deliveries of poultry bedding feedstock from the two clustered areas of poultry producers around Ballymena and Dungannon and the primary road network from those areas.



RoseEnergy 

Key

-  poultry producers
-  Rose Energy site

PLAN: Source Locations for Poultry bedding
SCALE: NTS

the **GRAHAM BOLTON PLANNING**
Partnership limited

Availability

8.31 The original site identified at Glenavy is that which is now proposed as the temporary construction compound area. It was only later on in the process that the property at 23 Ballyvannon Road became available and with it an area of land which not only is considered to be more suitable but by acquiring it the applicant and operating company, Rose Energy Ltd, would be secure in ensuring the deliverability of the project and also at reasonable cost in terms of the land element of the project.

8.32 As referred to in the Review Report, many sites were not available because of the restrictions placed upon some allocated sites in terms of use and also costs. The development has to be a viable solution to the problem of poultry litter disposal or reuse and commonly quoted costs in the order of £¾ million per hectare is prohibitive particularly if such funds have to be found upfront, years in advance of when the plant will be commissioned and generating an income. Also, any identified site has still to be available at the time when planning permission has been granted and agreement reached with suppliers for construction of the plant; given the potential time spans involved, the fact that Rose Energy has been able to acquire a site immediately adjoining the originally identified site, removes any uncertainty on that basis.

Conclusion

8.33 In total 45 potential sites were identified and a review undertaken of each of them. The choice of Glenavy was ultimately determined principally by the above factors. It is also in an area where there is a future need to reinforce the electricity supply and a link can be made to the Grid at an acceptable cost. The combination of factors, but particularly the exclusionary requirements for water and bio-security, together with the minimum site size, led to the conclusion that the site at Glenavy is the only available one which fits the requirements and which also has the particular benefits of being immediately proximate to the largest single fuel source and is a site which is available, and now secured by the purchase of the property which fortuitously came onto the market.

Policy Considerations

- 8.34 The development of proposed site will have an adverse impact upon the landscape character in this locality and visual impact, notably within a 1km zone around the site though existing landforms, trees and hedges limit those views to a large degree from many viewpoints. The site lies within designated Green Belt and an Area of High Scenic Value (AHSV), a designation which is intended to protect the setting of the Metropolitan Urban Area and other areas of particular landscape merit.
- 8.35 The issue of landscape and visual impact is encompassed within Strategic Policy ENV1 in the RDS. The green belt designation is now encompassed within the draft BMAP allocation under COU1. The policy in respect of the AHSV is COU7 of the draft BMAP.
- 8.36 Policy COU7 does not preclude development. It does preclude development for mineral working and waste disposal – the proposed development is not “waste disposal” which would be a reference to land filling. What is required in respect of this policy is to look at the affect of the proposal upon the quality, character and features of interest in the Area of High Scenic Value and mitigation proposed.
- 8.37 A full Landscape and Visual Impact Assessment has been prepared and mitigation proposals put forward, together with a landscape planting plan for the development. All development will have an impact. The substantial Ulster Farm development has been well assimilated into the countryside, assisted by its particular location, set down next to the Glenavy River and extensive tree planting around, much of which has been enhanced by additional planting and landscape mounding, particularly facing the Ballyvannon Road/Lurgan Road/Edenturcher Road junction.
- 8.38 The originally identified site for the development adjoining Ulster Farm, which is now the identified construction compound site, was outside of the AHSV. The opportunity to acquire the property of 23 Ballyvannon Road and the decision to

acquire it and use that as the site for the proposed development means that the scheme is within the AHSV. However, the originally proposed site would undoubtedly have been more conspicuous being at a higher level and without the backdrop of rising land behind, which forms the setting of views from the Lough towards the site. Over the originally proposed site, the current site is considered to be an improvement in that the plant can be set down within the landform at a significantly lower level than Ballyvannon Road, which enhances the backdrop of rising land behind, and other properties within the vicinity and provides a greater opportunity for landscaping, including mounding, around the periphery of the site. The proximity to the Glenavy River also means that the extensive tree cover along the river assists in masking to a degree and assimilating within the landscape the proposed development.

8.39 It must be concluded, however, that the proposed development will still be conspicuous and the impact upon the landscape and the visual impact itself needs to be weighed against the significant need for this proposal and the policies which support it and the employment that it in turn will help secure. As noted in paragraph 54 of PPS1, article 31 of the Planning Order lays down a special procedure that enables the Department to reserve to itself the final decision on proposals that raise issues of national or regional importance or on cases of particular contentious and sensitive nature. Clearly, this is an issue not just of regional importance but of national significance given the scale of the poultry industry and the importance it has to the economy and the jobs it supports.

8.40 PPS4: Industrial Development, also recognises not only that land will not normally be zoned for specific purposes within small rural settlements, but that it is not always appropriate to separate industry from rural or residential areas. The Chapter on Policy details the criteria referred to under paragraph 29 – the identified criterion not necessarily satisfied is that of compatibility with the character of the surrounding area in terms of landscape and visual impact.

- 8.41 This is a major industrial project, recognised in paragraph 47 of PPS4 where such projects may require sites outside settlements because of their size or specific site requirements. The assessment criteria referred to includes the contribution of the proposed development to the Northern Ireland economy, the availability of alternative sites and the environmental effects. The environmental affects have been considered within the Environmental Impact Assessment and are referred to within the Environmental Statement. All issues have been reviewed and where there are knowledge gaps, those have been identified – in respect of the aquatic environment, further work is being commissioned in the light of the studies but all the studies to date indicate that there will be no adverse impact. There are environmental benefits, referred to in the earlier chapter, and which also need to be weighed in determining the acceptability of this proposed development at this location.
- 8.42 One of the matters addressed in the Environmental Statement is the potential for additional traffic which is also a more straightforward planning issue. A Traffic Impact Assessment/Transport Assessment has been undertaken and is a supporting document and forms part of the Environmental Statement and is also a supporting document to the planning application.
- 8.43 The capacity and use of the existing road network in the immediate locality and links to the primary road network has been assessed including the use of Ballyvannon Road. The TA has included within its review the intended operating hours of the plant. While the power plant is intended to operate 24 hours per day, 7 days per week, except during planned shut down maintenance periods, deliveries of fuel and materials and removal of ash from the site would be restricted to between the hours of 7am and 7pm Monday to Friday and 7am and 1pm on a Saturday with no deliveries or collections outside those hours.
- 8.45 Ballyvannon Road and the local network is used by heavy goods vehicles visiting Ulster Farm By-Products and also in association with the sand dredging businesses operating on Lough Neagh. Traffic counts were undertaken in 2007

and 2008 and compared with the calculated levels of traffic expected from the proposed development. The traffic counts indicate that there is low usage of the local highway network and that the increased traffic levels resulting from the proposed development will be modest and well within the capacity of the local road network. The traffic expected to result from the power plant would be around 150 per day (two way trips, all types of vehicles), half the volume of traffic associated with Ulster Farm. The conclusion is that the proposal will have no unacceptable affects on any of the cited matters.

Conclusion

- 8.46 It is concluded that while the proposed development in this location will have a significant impact upon the landscape and visual impact, it will be assimilated in time and the specific site within this location is considered to be less prominent than many of the alternative sites which, though not covered by any protective designation, would have resulted in a more conspicuous development with less opportunity for mitigation.
- 8.47 The adverse impacts in terms of landscape and visual amenity must be weighed against the other policies. Policy IBD12 of Draft PPS4:Industry, Business and Distribution, refers to major industrial development in the countryside and lists six criteria, including criteria (d) that the development can be successfully integrated into the landscape. All the other criteria are satisfied, the first one of which refers to the development being a firm proposal of overriding importance that will make a significant contribution to the regional economy; in this instance this proposal will make a very significant contribution to the national economy.
- 8.48 The Regional Development Strategy for Northern Ireland, 2025, promotes strategic planning guidelines, the first of which is a strong, diversified and competitive rural economy. This is reflected in SPG-RNI 1, which seeks to maintain a working countryside with a strong mixed use rural economy and the subsequent policy RNI 1.1, which aims to sustain the continuing development of a strong agricultural and agri-food sector. Amongst the measures to achieve this is

developing renewable energy sources. This strategic guidance is a fitting context for the consideration of this proposed development which is of strategic importance to the agricultural sector and the maintenance of a strong agri-food business as well.

9. CONCLUSIONS

- 9.1 The proposal complies with the relevant requirements of PPS 1, 2, 3, 4, 11 and 14 and satisfies all the requirements of consultation draft PPS18 apart from the issue of visual intrusion. The issue of visual intrusion and effect upon the landscape also relates to the policy of protection for the AHSV and Green Belt. The general protective policies to preclude development except in certain circumstances, from development within rural areas, is aimed at ensuring a sustainable approach to development and protecting the character and appearance of the countryside.
- 9.2 The proposed will have not result in unacceptable harmful effects in terms of noise, health, ecology, traffic or flooding and the proposal will make a positive contribution to the reduction in greenhouse gases and provide a new source of indigenously produced renewable energy.
- 9.3 The key visual components of the facility is the 42m high boiler house and the 80m chimney stack, together with a plume part of the time that will be visible during certain weather conditions.
- 9.4 It has been assessed that the proposal will have a significant negative visual effect on four of the selected nine viewpoints (see the Landscape and Visual Impact Assessment) which can only be partially mitigated. This is one disbenefit to the scheme that must be weighed in the balance against the advantages that have been identified.
- 9.5 The benefits of this proposal need to be weighed against the disbenefits of negative visual impact and adverse impact upon the landscape, and the policies which apply to this issue and to the general protection of the countryside and direction of developments to within or adjoining settlements. Those benefits also include the wider environmental benefits identified earlier. It is submitted, however, that the significant benefits of the proposed development and the vital

need for it are issues of national significance for Northern Ireland which outweigh the localised disbenefits which may arise.

- 9.6 A search for alternative sites has been undertaken, following determination that this is the appropriate technology and scheme to solve the problem of disposal of poultry bedding. The needs of the proposed development, including the need for water, bio-security, proximity to fuel sources, and particularly availability of a site to allow the development to proceed quickly and viably, has determined that the site at Glenavy is where this power plant should be located.
- 9.7 The design of the power plant will prevent any harm being caused to nature interests and to the Glenavy River and the Lough itself which is an important location for local fishing and which, therefore, it is imperative to protect. Further research work and monitoring is being undertaken in support of the work already completed.
- 9.8 The development will cause visual intrusion for a radius of about 1km and will have substantial impact on some nearby viewpoints but the effects will be mitigated as far as possible.
- 9.9 Overall, however, the benefits of dealing with the major problem of how to dispose of poultry bedding and the opportunity to address the national requirements to increase the amount of energy provided from renewable sources outweigh the detriment to visual amenity and impact upon the landscape.