Communities Against Lough Neagh Incinerator (CALNI)

Site Selection Assessment

Biomass Fuelled Power Plant

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Executive Summary

In June 2008, Graham Bolton Planning Partnership Ltd (GBPP) on behalf of Rose Energy Ltd submitted a full planning application for a proposed biomass-fuelled power plant at a site located on Ballyvannon Road, near the settlement of Glenavy.

As part of their planning submission, Graham Bolton Planning Partnership Ltd (GBPP) submitted a document entitled ‘Review of Potential Sites for a Biomass Power Plant’, which outlined the various stages of the site selection process they undertook and how the final site was chosen. Further to considering the GBPP document, GBPP’s site selection process leads CALNI and Strategic Planning to be of the opinion that rather than following a methodical process of identifying the best available and appropriate site, the chosen site at Ballyvannon Road in Glenavy had been chosen from the outset.

The chosen Glenavy application site lies directly adjacent to a Site of International Nature Conservation Importance, and falls within an Area of High Scenic Value (AOHSV); the Department therefore must apply the policy test set out in Paragraph 41 of Planning Policy Statement 2 (PPS 2), which states that:

“The Department must first be satisfied that there are no alternative solutions. This means that the Department will consider whether there are, or are likely to be, suitable and available sites, which are reasonable alternatives for the proposed development, or different practicable approaches, which would have a lesser impact.”

The above policy test is enhanced with the recent Rose Energy submission for a separate planning application, which now shows that the proposed Incinerator must extract water directly from the designated European and Ramsar site, Lough Neagh.

In light of the PPS 2 policy test, and the inconsistencies of GBPP’s site selection process, Strategic Planning has been commissioned by the Communities Against Lough Neagh Incinerator (CALNI) to carry out an independent site selection process, which follows appropriate methodology and applies suitable criteria in order to identify appropriate site(s) for the location of a biomass-fuelled power plant within Northern Ireland. The identified sites were scored both in terms of a water sensitivity criterion and re-scored in respect to a criterion on the water resource availability in order to reflect suitable sites for either cooling methods (that is, air cooling, water and/or evaporative cooling).

Strategic Planning’s Site Selection Assessment identified 5 suitable sites for shortlisting, which included the following:

- Site 1 Woodside Road (North & South), Ballymena (Herein referred to as the Michelin site)
- Site 2 Land south-east of Sandholes Road, Cookstown
- Site 3 Global point/ Ballyhenry, Doagh Road, Newtownabbey
(Herein referred to as the Global Point site)

- Site 4  Land at Far Circular, Dungannon
- Site 5  Kilroot site, Carrickfergus

The availability of these top-listed sites was also considered, and it was found that the Kilroot Business Park at Carrickfergus is currently available, as it is for sale on the open market. The remaining sites cannot be ruled out, as they may well become available following the carrying out of land negotiations. Interestingly, although the Rose Energy's chosen Glenavy application site is available, it was scored and ranked the lowest in terms of the site's suitability.

This site selection assessment clearly shows that there are suitable sites that could accommodate the Rose Energy proposal, which would be more appropriate from a planning policy perspective than the current application site. Furthermore, there is one particular site, the Kilroot site, which although it is not the top suitable site, it has scored very well, and is currently available on the open market. The Kilroot site should, among the other high ranking sites identified, therefore be pursued as an alternative solution.
1 Introduction

1.1 Strategic Planning was appointed on behalf of the Communities Against Lough Neagh Incinerator (CALNI) to prepare an independent site selection assessment to identify a suitable location for a biomass fuelled power plant. The power plant’s primary use is to dispose of Northern Ireland’s poultry litter by incineration with electricity generation as a secondary use; the proposal herein will therefore be described as an incinerator.

1.2 CALNI has commissioned the preparation of a separate site selection assessment in order to find suitable site(s) for an incinerator on the foot of the flawed site selection assessment, which accompanied the pending full planning application for an incinerator at Ballyvannon Road, Glenavy (Planning ref. S/2008/0630/F). The current planning application made by Rose Energy with Graham Bolton Planning Partnership Ltd (GBPP) as agent remains to be decided by the Department, and is therefore still under scrutiny.

1.3 Setting aside the flaws previously identified in the separate Strategic Planning’s Objection Statements (No.1 and No. 2) as well as the ‘Protecting the Future: A Response to Rose Energy’ Objection Statement to the current planning application, the latest finding by Rose Energy that the proposed aquifers within the application site cannot supply the appropriate levels of water required for the evaporative cooling method, which is required to operate the incinerator; Rose Energy has now submitted a separate planning application and accompanying Environmental Statement for the extraction of water directly from Lough Neagh. This recent event reinforces the need for the Department to apply greater weight to regional Planning Policy Statement 2 (PPS 2).

1.4 As the development proposal will have to directly extract water from Lough Neagh, the degree of protection afforded is at the highest level. The abstraction of large volumes of water from Lough Neagh (almost 850,000 gallons a day – that is 3,864,178 litres per day) with 60 cubic metres per hour discharged directly into the Glenavy River, is likely to have an adverse affect on the integrity of the EU designated site. Hence, in compliance with PPS 2, the Department must therefore be convinced that there are no alternative solutions, that is, no suitable and available sites, in order to satisfy the policy test. Paragraph 41(a) of PPS 2 specifically states that “Applicants should demonstrate that they have fully considered alternative solutions.” Furthermore, as the Rose Energy planning application was subject to an Environmental Impact Assessment (EIA), there is a statutory requirement that alternatives are considered. Although Rose Energy did consider alternative sites in their Environmental Statement, Rose Energy should have conducted a more thorough and transparent assessment. For both these reasons, CALNI took the view for a detailed separate site selection assessment to be completed.

1.5 From the outset, it was clear that there was the need to carry out two differing approaches to the site selection assessment. One based on finding appropriate and available site(s) to accommodate an incinerator that relies on air cooling; the second for an incinerator, which

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1 ‘Biomass fuelled power plant’ is described by Graham Bolton Planning Partnership, but referred to in this document as ‘incinerator’.
requires water abstraction for the use of either the evaporative or water cooling methodology. Two separate site selection assessments have therefore been undertaken. In addition, the site selection assessment requiring water abstraction has been compared to the site selection assessment completed by Graham Bolton Planning Partnership.

1.6 The structure of this document is as follows:

(i) Outline of the incinerator proposal and its site requirements.
(ii) Identification of the study area.
(iii) Establish a list of appropriate sites with an explanation/methodology given on identifying the site selection list.
(iv) Establish criteria and a scoring system of the sites.
(v) Score the sites for an Incinerator where water abstraction is not required.
(vi) Re-score the sites based on the requirement of a water resource criterion.
(vii) Identify top short-listed sites and assess in more detail.
(viii) Highlight further sites that are available and more suitable than the Glenavy application site.

1.7 Further to defining a study area, a detailed systematic process will be undertaken in order to compile a suitable list of sites. The general process carried out is shown in the following flowchart. Once this process is carried out, the sites will then be selected for scoring and assessing.
By carrying out the above process in selecting suitable sites, it is envisaged that the two site selection assessments will clearly show that there are a number of suitable sites, which are available and meet with the strategic objectives of regional planning policy. In addition, a comparison of the second site selection assessment based on a water resource requirement with Graham Bolton Planning Partnership’s site selection assessment is likely to reiterate that Rose Energy chose the Glenavy application site prior to the carrying out of a full proper assessment.
2 Proposed Development

2.1 In line with the Rose Energy development proposal, the scheme is to develop a biomass fuelled 100 MW thermal plant, 30 MW electrical output power plant, which will export approximately 27 MW to the Northern Ireland grid. The biomass proposed to fuel the power plant is poultry litter and meat and bone meal. The burning of the poultry litter (a mixture of bedding and litter) as the main fuel component, would aid in solving the problem of its disposal in compliance with the EU’s Nitrates Directive.

2.2 Plant & Site Requirements

2.2.1 In line with the Rose Energy proposal, the plant and site requirements identified by GBPP are considered below:

- **Site Area of 5 hectares**
  An overall site area of 5 hectares is required to encompass approximately 2.6 hectares for buildings, with the remaining land for ancillary works, such as, landscaping, and car parking.

  5 hectares reflects the site area of the current Glenavy application site, and so sites of at least this size should be considered.

- **Connection to the NIE grid**
  Connection to the NIE grid must be achievable to enable 27 MW electrical output from the power plant. 27 MW has been taken from the stipulations of the Rose Energy proposal. GBPP stated a general assumption that “a connection to the grid could be made, notably within or close to urban areas. Where a site is in a more remote location away from centres of population or development, it will be assessed that connection to the grid would be lengthy, and therefore costly, and be in an area which would not require reinforcing of power supplies.”

  It has been decided that it would be more appropriate to score the sites in terms of their distance from the existing sub-stations and NIE power stations within the province, and their proximity to the consumer base.

- **Proximity to fuel source**
  Proximity to the fuel source would minimise the need for transporting the material, the costs involved and emissions arising from transporting - this accords with the proximity principle referred to in the Waste Management Strategy for Northern Ireland and PPS 11: Planning and Waste Management.

  The plant is proposed as biomass fuelled, using both poultry bedding and meat and bone meal (MBM) - 220,000 Te of poultry bedding and 40,000 Te of MBM. The fuel

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2 As highlighted in Objection Statements No. 1 and 2, it is our view that there is no need for Meat and bone meal; however, it has been included to ensure the proposal is similar to the Rose Energy proposal.
requirements clearly show that a much greater percentage of the total fuel consumption will comprise of poultry bedding (85%) rather than MBM (15%).

If MBM comprises only 15% of the total fuel requirement, then it stands to reason that a location closer to the main fuel source, poultry bedding would be the best economic and environmental option in accordance with the proximity principle outlined in the Arc 21 Waste Management Strategy and Planning Policy Statement 11: Planning and Waste Management. The proximity to waste arisings of poultry litter will be used in scoring the sites.

- **Biosecurity**

GBPP has highlighted that bio-security is an important issue in selecting a site with GBPP making reference to the Avian Influenza (AI) and Newcastle Disease (ND). GBPP has pointed out that regulatory restrictions are now in place when such notifiable diseases occur and control of movements to and from sites within 10km of the location of an outbreak or suspected outbreak passes to DARD’s veterinary service; within 3km there is stringent control of movements of livestock and vehicles visiting livestock premises. GBPP continues to state that locating the incinerator at least 10km away from any cluster of poultry sheds or production plants or minimising the number within a 10km radius, and more than 3km from any single poultry producer or shed would reduce the risk of disruption to the supply of material to the plant, or off-site removal of poultry bedding from sites outside a restricted zone, while minimising the potential spread of disease.

The view has been taken to not apply the biosecurity criterion for the reasons previously highlighted in Strategic Planning's previous objection statements, and the 'Protecting the Future' document. The biosecurity criterion is flawed for the reasons outlined in paragraph 7.3.4.2 of the 'Protecting the Future' document:

“The first point to note about this restriction is that it is imposed by the company; it is not required by the EU directives referred to in the above paragraph. Second, if an outbreak of AI or ND were to occur, the movement restrictions would apply fairly generally; to the area where the outbreak occurred, to poultry producers close to the transport routes to the company’s site and to the receiving site itself. Hence, wherever the incinerator was located in Northern Ireland, its operation would be greatly constrained by the outbreak. Third, the restriction is self-serving: it ensures that the plant is not located close to those who produce the pollution, thereby circumventing the fundamental principle that the polluter should pay. Fourth, it contravenes the proximity principle laid down in PPS 11 (para. 1.23) and PPS 18, Policy RE 1 (p.14) that wastes should be treated or disposed of as close as possible to their point of generation so as to minimise the environmental impact and cost of transport. Fifth, even on its own terms, the restriction does not support the case for a specific site such as Glenavy; the plant could be located anywhere in Northern Ireland that is 3-10 kms from the main poultry producers.”
The biodiversity requirements would clearly be contrary to the proximity principle of locating closer to the poultry producers. For this reason, the biodiversity constraints are not included.

- Accommodation requirements
  A boiler house of a minimum height of 42m, and material intake hall and bunker storage facility sufficient for 4 days supply is required.

  The integration of the proposal into the landscape should be considered.

- Operational requirements
  The plant is required to be operational for 7,700 hours per year, and to accept deliveries of fuel, 5½ days per week.

  Accessibility of the sites will be a factor in the scoring of sites.

- Site availability
  Identify sites that are available for acquisition, that is, sites for sale on the open market.

  The availability of sites will be considered as far as identifying current available sites through an estate agency trawl. However, if a site is not found to be currently for sale on the open market, it would not be unreasonable to assume that an attractive commercial offer could be put forward, which would make the site available. In terms of practicality, it was not possible to approach landowners, and so results from estate agents can only provide part of the picture. In any event, it is not clear whether the sites that would be scored as ‘unavailable’ are actually so until landowners are approached. For instance, the current Rose Energy planning application site may well have only become available because the landowner was approached. For these reasons, and taking the approach that ‘available sites’ is separate to ‘suitable sites’; it has been decided that the sites will not be scored against the availability criterion.

- Viability
  GBPP identified viability stating that this means that a site which is costly to acquire, or located where a connection to the grid would incur excessive costs or where potential additional costs may result because of the location, such as new road works, would undermine viability.

  A site, which is therefore closer to the NIE grid and would result in minimal new road works, would be a preference.

- Water Availability v. Water Sensitivity
  In addition to the above requirements, for the incinerator to operate, a cooling method has to be applied, which can have implications on the design requirements and in selecting a site. There are three forms of cooling:
- air cooling;
- evaporative cooling (which requires cooling towers); and
- water cooling (extraction of a substantial amount of water from a large body of water for cooling and returning it to a large "sink" to absorb the heated water).

Both evaporative cooling and water cooling require significant amounts of water to be abstracted, whereas air cooling does not require water abstraction. As highlighted in the Rose Energy proposal, loop water cooling of the proposed plant would require the abstraction of between 4000m³ and 6000m³ of water per hour. This water would be used to condense and cool the superheated steam within the closed loop of water/steam which drives the turbine to generate electricity, and is then returned to the water body from which it was abstracted. A large body of water is required for abstraction and to act as a “sink”. Water cooling necessitates a site in an accessible position to either the sea or a large lake.

Evaporative cooling requires the installation of cooling towers. Again, as identified by GBPP, a substantial amount of water is required for the power plant development - approximately 160m³ per hour of water. For evaporative cooling, a nearby water body is also required. The current Rose Energy plant is proposing to be cooled by evaporative methods with the installation of three cooling towers and water abstraction directly from Lough Neagh. It is therefore clear that a large body of water is required for adopting either the evaporative or cooling methods.

GBPP has ruled out air cooled incinerators highlighting that it involves a substantial financial penalty in comparison with water cooling. However, no substantive information has been provided to back up this claim. As such, the view has been taken that it is unreasonable to rule out air cooled incinerators solely for this reason, particularly when no firm evidence has been provided. The cost factor must be balanced against a broad variety of other issues such as environmental risk, visual impact, accessibility, proximity etc. and therefore use of air cooling cannot be ruled out simply on the basis of increased cost if other factors weigh heavily in its favour. Thus, air cooled incinerators should still be considered as a viable alternative within the PPS 2 test.

It is therefore clear that in the site selection process, two alternatives assessments are required, one assessment, which examines water sensitivity as a criterion whereby air cooling could operate, and the second assessment with the key criterion of water resource availability to enable either the evaporative or water cooling to take place. Both scenarios are considered in the site selection assessment.

2.2.2 The above plant and site requirements have been considered, and where appropriate have been taken forward in this site selection assessment.
3 Identification of Study Area and the Methodology for Defining the Study Area

3.1 Further to identifying the basic site and design requirements taken from the Rose Energy proposal, such as, the need for a 5 hectare site, Section 3 outlines the study area, and the methodology applied in defining the search area. The methodology for selecting the sites within the study area and a defined list of sites are identified in Section 4. Section 5 outlines the criteria applied in scoring the selected sites leading to a shortlist of suitable and available site(s). The study area is defined in the forthcoming paragraph followed by the methodology applied in deriving at the identified study area.

3.2 Identification of Study Area

3.2.1 The study area is defined by the boundaries of fifteen Council Areas, which are identified below.

![Figure 1: Map identifying Study Area](image)

3.3 Criteria for Identifying Study Area

3.3.1 The fifteen Council Areas derived from applying two criteria:

- The proximity principle - an examination of the higher concentrations of poultry producers.
- Identification of the key transport corridors.

3.3.2 Proximity Principle

3.3.2.1 In line with PPS 11 and the WMS, the proximity principle is applied, that is, locating close to the main fuel source, that is, poultry litter. The distribution of poultry producers were
therefore examined based on findings from the Department of Agriculture and Rural Development (DARD). The Council areas with a higher concentration of poultry producers falling within the 250,000-699,000 animals per SOA (super output area, that is, the ward) and within the 100,000-250,000 animals per SOA were identified, as well as groupings of these higher concentrations (refer to Figure 2 and 3).

Figure 2: Map of Northern Ireland showing the concentrations of the locations of poultry producers. Source: DARD

Figure 3: Study Area with higher concentrations of poultry producers identified in darker red.
3.3.3 Key Transport Corridor

3.3.3.1 In addition to identifying the main concentrations of poultry producers in the province, the key transport corridors have been examined. As there will be a significant number of trips to and from the plant, it is important to concentrate the study area within Council areas that have good key transport corridors, as well as high concentrations of poultry production. The map below identifies the key transport corridors within the study area.

Figure 4: Map showing the higher concentrations of poultry producers and the key transport corridors within the identified study area

3.4 Conclusions

3.4.1 Of the twenty-six council areas covering Northern Ireland, fifteen council areas were identified as the study area (as shown on Figure 1). A list of the council areas identified for further investigation (Table 1), is included in Appendix A. The other Council areas were excluded as they were too remote and not in a centralised location to be in close proximity to the main concentrations of poultry producers, which are grouped in and around Ballymena/Antrim and Cookstown/Dungannon.
4 Methodology for Selecting Sites within the Study Area and Identification of List of Sites

4.1 Further to identifying the study area, the next stage of the site search was to identify a list of selected sites, which would be scored and assessed. The methodology applied in reaching a final list of selected sites within the study area was carried out in various stages. Commencing with stage 1, the starting point was to identify the industrial zoned sites within the settlement development limits of the study area. Industrial zoned sites were identified, as the industrial land use has already been accepted in principle or proposed by the Department. In addition, it seems appropriate to examine industrial zoned lands as it would be the most similar land use zoning for incinerators, and furthermore the Waste Management Plans refer to directing waste proposals at industrial lands. Stage 2 then involved a desktop planning history search of the industrial zoned sites, as a mechanism in ascertaining the undeveloped lands of a suitable size within the industrial zoned sites. Further to stage 2, stage 3 involved the carrying out of a desktop estate agency search. Stage 3 included investigation into whether selected sites from stage 2 were for sale on the open market, as well as the carrying out of a full desktop estate agency search of additional suitably sized sites for sale within the study area. A final list of selected sites were then identified and compiled in stage 5.

4.2 The various stages of the methodology applied in reaching the final list of selected sites are discussed in detail below.

4.3 Stage 1: Industrial Zoned Lands

4.3.1 Industrial zoned lands across the relevant area plans in the study area were examined. The identified industrial zoned lands are shown in Table 2, which is included in Appendix B. Table 2 details the site location, its existing or proposed zoning in the relevant area plan, the site size and whether or not it would be suitable for further consideration. 31 sites in total were identified through the search of the Area Plans.

4.4 Stage 1: Conclusions

4.4.1 The 31 sites were examined in terms of their suitability. 23 out of the 31 sites were taken forward for further consideration in the assessment process. The remaining 8 sites were ruled out for a number of reasons, including: lands already built-out since publication of the relevant area plan; incompatible land uses on-site and/or adjacent to the site, for example, hospitals, or nearby residential development; and unsuitability of site shape.

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3 It is accepted that an incinerator is likely to be considered by the Department as sui-generic, and therefore not fall within the same use class as ‘industrial’. However, an assumption has been made that industrial zoned land would be the preferred location than any other zoned land, such as, housing, as industrial uses are quite similar in nature to an incinerator/power plant.

4 It should be noted that unzoned lands within the settlement development limit, commonly referred to as 'whiteland' were also examined, but it was clear that these lands were unsuitable, as the lands were either too small, already built upon, or with extant planning approvals.
4.5 **Stage 2: Planning Histories & Undeveloped Zoned Industrial Lands**

4.5.1 The 23 sites identified in Stage 1 were then the subject of a thorough desktop planning history search. This process was carried out to identify any portions of land within the areas, which were already earmarked for development or the subject of a pending planning application(s). When required, copies of the proposed site plans and/or site location plans of relevant pending planning applications or planning approvals found in the desktop planning history search were obtained from the relevant Divisional Planning Office. The relevant planning histories for the 23 industrial zoned sites were recorded in Table 3 (Appendix C), and consequently used to rule out areas of land for further consideration.

4.5.2 In comparing the information obtained in the planning history search with the identified 23 zoned industrial sites, the remaining available lands were estimated and their location within the zoned identified sites. Where the land available exceeded 5ha, and there were no restrictions to development, these sites were identified as suitable for further consideration in the site selection process.

4.6 **Stage 2: Conclusions**

4.6.1 As a result of the planning history search, three further sites were ruled out - no.14 Galgorm (Ballymena), no.15 Rathenraw (Antrim) and no.16 East of Charlestown Road (Craigavon). Nos. 14 and 15 were found to be largely developed. Similarly, portions of no.16 have been developed or are already earmarked for development. Any remaining lands within these sites either fell below the 5ha site area requirement, or the remaining lands were deemed to be unsuitable. Both sites no. 14 and no. 15 were ruled out as they were incapable of accommodating the proposed incinerator development. Pockets of land in no.16 were either adjacent to housing or within very close proximity of the town centre. Subsequently, 20 undeveloped industrial zoned sites were identified at Stage 2. The findings were recorded in Table 4 which is included in Appendix D.

4.7 **Stage 3: Estate Agency Search**

4.7.1 Further to identifying undeveloped zoned industrial sites of an appropriate size within the study area, it was also necessary to ascertain whether these 20 sites were available on the open market. Stage 3 therefore involved checking with estate agents as to whether these sites were for sale. In addition to checking these sites with estate agents, alternative sites of a suitable size and within the study area, which were for sale, and hadn’t been identified in Stage 1 and 2, were also considered. The estate agency search was carried out by trawling through numerous property websites followed by telephone enquiries to the various estate agencies. The list of estate agencies contacted is shown in Figure 5 below.

4.8 **Stage 3: Conclusions**

4.8.1 Further to checking with the estate agencies the undeveloped zoned industrial 20 sites, it became clear that portions of two of the zoned industrial sites (lands north and south of
Antrim Road, Newtownabbey) were for sale. In addition, estate agencies advised that 4 of the 20 zoned sites were owned by Invest Northern Ireland (INI). The remaining 14 sites did not appear in the estate agency search. The decision was made to include all 20 zoned industrial sites in the final site selection list, as there may well be the opportunity for land negotiations to be carried out.

4.8.2 In addition, the estate agency search identified a total of 18 sites with an appropriate site area that were available on the open market and within the study area (refer to Table 5 in Appendix E). Of these 18 sites, 10 sites were ruled out for a number of reasons, such as, site size, poor access, and proximity to sensitive receptors. During the search period 2 sites became Sale Agreed.

4.8.3 Eight of the eighteen sites identified through the estate agency search remained within the site selection list. Some of these sites were Greenfield sites and fell outside the settlement development limits. The view was taken to include these sites, as they were in close proximity to key transport corridors, such as, Nutts Corner. Other sites within the rural countryside were previously developed, including existing buildings and one for instance was a former quarry, and so for these reasons, remained a consideration for the final selection list.

4.9 Stage 4: Consideration of GBPP Sites

4.9.1 Further to carrying out stage 1 to stage 3, it was considered worthwhile to reflect on the sites identified by GBPP in their site selection assessment. The site selection process carried out by GBPP on behalf of Rose Energy identified a total of 45 sites for further investigation. It was accepted that these sites should be reviewed as part of Strategic Planning’s site selection process in order to either include the sites for further consideration or to dismiss them for varying reasons.
4.9.2 The GBPP sites were compiled into a table, examined and reviewed to determine whether they were suitable for inclusion or dismissal. The additional sites considered worthy to include were identified in Table 6 in Appendix F.

4.10 Stage 4: Conclusions

4.10.1 Of the 45 sites, 25 sites were ruled out for further consideration for reasons including small site size, proximity to sensitive receptors, such as residential developments, incompatible land uses and sites already built out. For the remaining 20 GBPP sites, 18 had already been identified by Strategic Planning as potential sites either through the area plan search of industrial zoned lands, or through the search of estate agents, that is, during Stages 1 to 3 of the site selection process.

4.10.2 The two remaining sites, which were excluded and not identified in Stage 1-3 of our site selection, is a site at Glenavy Road near Moira (no.23 on GBPP’s list), and the current planning application site at Glenavy (no.13 on GBPP’s list). It was accepted that the Glenavy Road, near Moira (no. 23) should be taken forward for further consideration, as the lands were previously used as a quarry.

4.10.3 The Rose Energy planning application site at Ballyvannon Road, Glenavy (no.13 on GBPP’s list) was not identified in the search of zoned industrial land within area plans, or found to be available on the open market. As such, it would not have come into our final selected sites. However, as Rose Energy has identified the site as available, and with the current planning application pending, the Ballyvannon Road, Glenavy site is considered.

4.11 Stage 5: Final list of sites for further consideration

4.11.1 Having considered all of the sites identified through each stage of the search, a final list of selected sites was compiled into Table 7 and renumbered accordingly (Appendix G).

4.12 Stage 5: Conclusions

4.12.1 The final stage identified a list of a total of 31 sites, which are identified in Figure 6. All of these sites were then the subject of site visits and subsequently scored against set criteria as discussed in the forthcoming sections of this report.
Figure 6: Map identifying sites locations within study area
5 Identified Criteria to Assess and Score Sites

5.1 Having established a list of 31 selected sites within the study area, the view was taken that in order to assess these sites and give the sites appropriate scorings, the criteria outlined in government guidance would be applied. With this in mind, the Waste Management Strategy (WMS) and the Waste Management Plans (WMP) have been considered.

5.2 As highlighted in paragraphs 6.6.8 – 6.6.23 of Strategic Planning’s Objection Statement No. 2 (March 2009), weight should be applied to the WMS and the relevant WMPs in the consideration of a waste facility, including facilities for the disposal of agricultural waste, which falls within the controlled waste category.

5.3 The study area falls within all three Waste Management Plans:

- Arc 21 Waste Management Plan
  (Antrim, Ballymena, Carrickfergus, Larne, Lisburn and Newtownabbey Council Areas)

- North West Region Waste Management Plan
  (Ballymoney, Coleraine and Magherafelt Council Areas)

- Southern Waste Management Plan
  (Armagh, Banbridge, Cookstown, Craigavon, Dungannon & South Tyrone, and Omagh Council Areas)

5.4 Arc 21 Waste Management Plan Criteria

5.4.1 Both the North West Region WMP and the Southern WMP do not provide specific criteria for selecting sites for a waste management facility, whereas the Arc 21 WMP, which covers a significant portion of the study area, clearly sets out a full chapter outlining criteria for selecting sites. The key criteria identified in the Arc 21 WMP include:

- planning policy;
- accessibility;
- site setting;
- existing site condition;
- proximity to waste arisings;
- landscape and visual impacts;
- nature conservation;
- water resource sensitivity;
- amenity, air quality and environmental nuisance; and

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5 Agricultural waste was included in the definition of "controlled waste" in the Waste and Contaminated Land (NI) Order 1997 from 31 July 2006 under the Waste Management Regulations (NI) 2006.
• other issues.

5.4.2 Below is a brief outline of each of the Arc 21 WMP criteria followed by how these criteria have been used in scoring the 31 selected sites:

• Planning Policy

Sites are assessed against the relevant planning policies applicable to the site in question so that the greater the compliance with policy, the greater the score allocated. For instance, if development on selected sites meets with specific planning policy objectives, then a high scoring should be given. If, however, there would be a significant departure from existing planning policies, a low scoring should be allocated. The key planning documents include the Regional Development Strategy 2025, area plans, and planning policy statements.

Planning Policy has been used as a key criterion in scoring the sites. A higher scoring was given for those sites whereby the proposal would appear to meet with specific planning policy objectives.

• Accessibility

This criterion assesses the degree to which the site’s accessibility is suitable, the potential impact on the transportation network and access into the site itself.

The accessibility criterion has been applied with a higher scoring given for those sites with very good access and a lower scoring allocated for those sites with a poor junction layout, or access roads unsuitable for waste vehicles.

• Site Setting

The site setting criterion examines the suitability of site size to accommodate the proposal, as well as the potential land use constraints associated with the nature of neighbouring land uses, sensitive receptors (schools, hospital etc.).

The site setting criterion had been excluded at the scoring of the site stage, as it was realised that this criterion had already in fact been applied earlier at Stages 1 and 2 of selecting the final list of sites for consideration. All of the listed 31 sites were deemed appropriate in site area for accommodating the proposal. In addition, sensitive receptors (such as, hospitals, and schools), which directly abutted sites had been identified, and any sites that were effected, were excluded from the final selected list. As such, there was no need to include the site setting criterion in the next stage of assessing and scoring the final selected sites, as it had already been carried out earlier in ruling out sites, and deriving at the final selected list of sites.
• **Existing Site Condition**

The potential for planning gain and the assessment of any factors, which would preclude development of the site, are considered under this criterion.

*The existing site condition criterion has been applied with a higher scoring allocated for those sites where there would result in the potential of cleaning up a brownfield site. On the other hand, a low scoring would be given where the existing physical conditions would be clearly incompatible with the nature of the proposed development.*

• **Proximity to Waste Arisings**

The Arc 21 WMP states that locating a site close to a source of waste arisings is related to the objectives of the proximity principle, which together with the concept of regional self-sufficiency, is central to the waste management concepts identified in PPS 11. Therefore sites closest to waste arisings will achieve a higher scoring.

*The proximity principle has been applied with those sites located closest to the major source of waste arisings allocated a higher scoring, and those remote from the waste arisings given a lower score. The distance ranges used to score the sites included: 0 – 2.5km, 2.6 – 10km, 11 – 25km, 25 – 40km and >40km.*

• **Landscape and Visual Impacts**

Assessment of visual impact considers the proposed site when viewed from neighbouring properties, main transport routes and sensitive public vantage points. Any sites which would be considered to have such impacts (either long or short range) would score lower in the assessment.

*The landscape and visual criterion has been applied. Those sites were the visual characteristics will be greatly improved have scored highly, whereas sites, which are at a complete variance with the landform, scale and patterns of landscape have been allocated a low scoring.*

• **Nature Conservation**

Nature conservation constraint areas include those categorised as being of international or Northern Ireland importance, such as, Ramsar sites, Areas of Special Scientific Interest (ASSIs). The assessment also considers areas covered by Sites of Local Nature Conservation Importance, woodlands and countryside parks. In addition, flora and fauna will be considered. If it cannot be proven that the proposed development will not have an adverse effect on a site’s integrity then the impact is assessed as a negative and scored accordingly.

*The nature conservation criterion has been used in scoring the sites. A high scoring has been allocated to those sites where there is the potential for significant enhancement of*
a site’s ecological value and a low scoring given for those sites where the proposal would have a direct impact on a site of international importance.

- **Water Resource Sensitivity**

For this criterion, the proximity of a proposed site to surface watercourses is considered in terms of environmental sensitivity. A neutral scoring is given if the site is considered remote from any sensitive receptors. A positive scoring would be allocated if there is the potential for improvements to local water resources as result of the proposal, that is, through mitigation measures. A significant negative effect scoring would be allocated if the site is situated in very close proximity to sensitive water resources, such as, groundwater aquifers, and mitigation measures are unlikely to prove effective.

*The water resource sensitivity criterion has been applied to air cooled incinerators.*

- **Amenity, Air Quality and Environmental Nuisance**

The effects of dust and exhaust emissions from plant during construction and operation will have an impact upon sensitive receptors and to wildlife close to the site, and may also have an effect on the amenity of surrounding land uses.

*This criterion has been applied. Where sensitive receptors such as residential areas are located close to a potential site, this will result in a lower scoring for the site in the assessment.*

- **Other Issues**

It is important to consider the proximity of features of cultural interest, particularly, archaeological sites and/or historic buildings/monuments, and the degree to which issues such as noise, vibration, visual intrusion or other disturbance may affect the historical significance or setting of a site or area, loss of amenity, or changes in the landscape setting. The significance of the impact is assessed on the basis of the importance of the site/feature and the extent of the effect.

*Other Issues criterion was applied, and a neutral scoring given if there would be no impact on any known sites of archaeological interest either on or near to the site.*

5.4.3 With the exception of the site setting criterion, the above criteria from the Arc 21 WMP have been used in the next stage of scoring and assessing the selected sites for an Incinerator.

5.5 Additional Criteria

5.5.1 In addition to the Arc 21 WMP criteria listed above, in light of the design requirements of the Rose Energy proposal, it was considered appropriate to apply two additional criteria in scoring the sites, which are:
• **Services – NIE Grid Connection**

In addition to the Arc 21 WMP criteria, as the Rose Energy proposal requires connection to the NIE grid, the sites were scored in terms of their distance from the existing substations and/or power plants within the province, and their proximity to the consumer base. The highest scoring was given for those sites, which were adjacent to a point of connection to the grid, that is, within 0-3km from either an 110kv substation, a 275kv substation or a power station and within close proximity to the consumer base. The lowest scoring was allocated for those sites where the site location was greater than 15km away from an 110kv substation, a 275kv substation, or a power station and so connection would be difficult and the site is remote from the consumer base. The location of existing NIE sub-stations and power stations were identified from the map below, which was used to score the sites.

![Figure 7: Identification of NIE Sub-stations in relation to the sites](image)

• **Water Resource Availability**

In respect to the water resource sensitivity criterion, it was realised that there would be conflict with applying this criterion to a proposed incinerator, which requires the use of either the evaporative cooling or water cooling methods. As there is a design requirement to abstract water from a large body so that either the evaporative cooling or water cooling methods can operate, it has reluctantly been decided to exclude the water resource sensitivity criterion and re-score all of the sites against the water resource availability criterion, which though would be at odds with the water resource sensitivity
criterion outlined in the Arc 21 WMP. This will therefore result in two site selection assessments; one assessment for an incinerator adapting air cooling, which would include the water resource sensitivity criterion; and a second assessment, which re-scores the sites against a water resource availability criterion for an incinerator using either the evaporative or air cooling method.

5.6 Scoring of the Sites

5.6.1 In the Arc 21 WMP, each of the above criteria were divided into categories according to the level of effect – i.e. ‘Positive effect’, ‘Neutral effect’, ‘Limited Negative effect’ and ‘Significant Negative effect’. These were accepted, although modified slightly, so that the neutral effect scoring would be ‘balanced’ by two levels of both positive and negative effects, i.e. a further ranking was added so that a ‘Significant Positive effect’ would score a total of 5 points (refer to Appendix H, which lists the categories for the various criteria). The scorings ranged from 1-5 with a score of 1 allocated when it was considered that there was a ‘significant negative’ effect, and a score of 5 given for ‘significant positive’ effect. For sites allocated with a higher overall scoring, then the site was considered more suitable.

5.6.2 Survey sheets listing the criteria and the various scoring categories were completed on-site separately by two surveyors in order to obtain an objective ranking of each of the sites. Further to the site inspections, the two surveyors discussed and agreed upon scorings to obtain the final score for each individual site. Details of the assessment process and resultant site scoring are discussed in the forthcoming section (Section 6).
6 Assessment and Site Scoring

6.1 Further to identifying the selected sites and appropriate criteria, the 31 sites were inspected on the ground and subsequently scored against the criteria. The scoring of the sites against the list of criteria are shown in Table 8 and Table 9 (refer to Appendix I). Table 8 highlights the scores allocated with the water sensitivity criterion included, whereas table 9 gives the scorings based on the water resource availability criterion. The site scorings with the water sensitivity criterion indicates the more suitable sites for an incinerator, which relies on air cooling; whereas the second scoring matrix, which applies the water resource availability criterion, highlights the preferred sites for an incinerator based on either water or evaporative cooling. The overall total scorings of the individual sites for the two assessments indicates the order of preferred suitable sites with the highest ranked sites considered as more suitable. Full details of the reasoning for the site scorings allocated to each category are included in Appendix J.

6.2 It should be noted that scoring is a subjective exercise and not a precise science. The scores are based on professional judgement. It should be remembered that there is rarely any such thing as the perfect site; rather, the scoring will attempt to identify the site that best fits the requirements of the proposed development, an incinerator.

6.3 In the forthcoming paragraphs, the overall scorings of the 31 sites for the two scenarios (water sensitivity v. water resource availability) are outlined, followed by an analysis of those sites, which scored highly, indicating the more suitable sites for an incinerator. In addition, the availability of the highest-ranked sites is considered. The total scorings allocated to each site within the two site selection assessments are discussed below.

6.4 Short-listed Sites with the Water Sensitivity Criterion
(Incinerator cooled by air)

6.4.1 The scoring matrix (Appendix I), which applies the water sensitivity criterion, highlights suitable sites for an incinerator cooled by air. The top sites for short listing and further investigation include:

- Site 1 Woodside Road (North & South), Ballymena (Herein referred to as the Michelin site)
- Site 2 Land south-east of Sandholes Road, Cookstown (Herein referred to as the Sandholes site)
- Site 3 Global point/ Ballyhenry, Doagh Road, Newtownabbey (Herein referred to as the Global point site)
- Site 4 Land at Far Circular, Dungannon
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<thead>
<tr>
<th>Site No.</th>
<th>Site Location</th>
<th>Score</th>
<th>Ranking</th>
<th>Availability</th>
</tr>
</thead>
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</tr>
<tr>
<td>2</td>
<td>Northbrook Ind. Estate, Newmills Road, Coleraine</td>
<td>34</td>
<td>10</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>Lands North of Antrim Road, Newtownabbey</td>
<td>34</td>
<td>10</td>
<td>Yes (circa. 11.23ha – see site no. 23)</td>
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<tr>
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</tr>
<tr>
<td>5</td>
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<td>37</td>
<td>2</td>
<td>Invest NI land</td>
</tr>
<tr>
<td>6</td>
<td>Blaris Road, Lisburn (M1 side)</td>
<td>35</td>
<td>6</td>
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</tr>
<tr>
<td>7</td>
<td>Blaris Road, Lisburn (City side)</td>
<td>34</td>
<td>10</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>Knockmore/ Ballinderry Road, Lisburn</td>
<td>33</td>
<td>17</td>
<td>No</td>
</tr>
<tr>
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<td>Woodside Road (North &amp; South), Ballymena</td>
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</tr>
<tr>
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<td>Land at Coolhill, south of Moy Park, Killyman Road, Dungannon</td>
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</tr>
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<td>29</td>
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<tr>
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</tr>
<tr>
<td>15</td>
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</tr>
<tr>
<td>17</td>
<td>Edenaveys, Armagh</td>
<td>27</td>
<td>26</td>
<td>Invest NI land</td>
</tr>
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<td>18</td>
<td>Mullinure, Armagh</td>
<td>27</td>
<td>26</td>
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<td>Land at Ballymoghan Road, Magherafelt</td>
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<td>Land at Drumahoe, Larne</td>
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<td>23</td>
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</tr>
<tr>
<td>25</td>
<td>Land at Poplar Road, Crumlin</td>
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<td>26</td>
<td>Land at Moira Road, Nutts Corner</td>
<td>28</td>
<td>24</td>
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</tr>
<tr>
<td>27</td>
<td>Kilroot Business Park, Carrickfergus</td>
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<td>32</td>
<td>21</td>
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<td>30</td>
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<td>31</td>
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<td>17</td>
<td>31</td>
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</table>

Figure 8: Final scores and ranking of sites (with water sensitivity criterion applied)
6.5 Short-listed Sites with the Availability of a Water Resource Criterion

(Incinerator cooled either by evaporative or water cooling)

6.5.1 The scoring matrix (Appendix I), which applies the water resource availability criterion, highlights suitable sites for an incinerator cooled either by evaporative or water cooling. The top sites for short listing and further investigation include:

- Site 1  Global Point/ Ballyhenry, Doagh Road, Newtownabbey
  (Herein referred to as the Global point site)
- Site 2  Woodside Road (North & South), Ballymena
  (Herein referred to as the Michelin site)
- Site 3  Land at Far Circular, Dungannon
- Site 4  Kilroot Business Park, Carrickfergus

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Site Location</th>
<th>TOTAL</th>
<th>RANKING</th>
<th>Availability</th>
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</thead>
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<td>1</td>
<td>Riada Avenue, Ballymoney</td>
<td>28</td>
<td>23</td>
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<td>2</td>
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<tr>
<td>3</td>
<td>Lands North of Antrim Road, Newtownabbey</td>
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<td>16</td>
<td>Yes (circa. 11.23ha – see site no. 23)</td>
</tr>
<tr>
<td>4</td>
<td>Lands South of Antrim Road, Newtownabbey</td>
<td>34</td>
<td>8</td>
<td>Yes (circa. 5.75ha – see site no. 22)</td>
</tr>
<tr>
<td>5</td>
<td>Global Point/ Ballyhenry, Doagh Road, Newtownabbey</td>
<td>38</td>
<td>1</td>
<td>Invest NI land</td>
</tr>
<tr>
<td>6</td>
<td>Blaris Road, Lisburn – M1 side</td>
<td>34</td>
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<td>Blaris Road, Lisburn – Town side</td>
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<td>5</td>
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<td>Edenaveys, Armagh</td>
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<td>50A Moira Road, Nutts Corner, BT29 4JS</td>
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<td>31</td>
<td><strong>Ballyvannon Road, Glenavy (Application Site)</strong></td>
<td><strong>21</strong></td>
<td><strong>Yes</strong></td>
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</tr>
</tbody>
</table>

Figure 9: Final scores and ranking of sites (with water resource availability criterion applied)

### 6.6 Overall Short-listed Sites

6.6.1 Interestingly even with the change in criterion of water sensitivity versus water resource availability, similar sites are coming up top in the site selection assessment. The identified five sites are listed below. The general locations of these sites are shown in Figure 10.

- Site 1 Woodside Road (North & South), Ballymena  
  (Herein referred to as the Michelin site)
- Site 2 Land south-east of Sandholes Road, Cookstown  
  (Herein referred to as the SE Sandholes site)
- Site 3 Global Point/ Ballyhenry, Doagh Road, Newtownabbey  
  (Herein referred to as the Global Point site)
- Site 4 Land at Far Circular, Dungannon
- Site 5 Kilroot Site, Carrickfergus
6.6.2 It should also be pointed out that the current planning application site at Ballyvannon Road, Glenavy (Site no. 30), which although available, clearly falls well short in terms of its overall scoring for suitability. In fact, the application site was allocated the lowest scoring in terms of suitability.
7 Quality Assessment of Short-listed Sites

7.1 Having identified the top suitable sites for an incinerator, a more detailed description of each suitable site, and the availability of the lands is considered.
7.2 Michelin site

7.2.1 Site Description

7.2.1.1 The Michelin site falls within the development limit of Ballymena, and is zoned for industrial use in the Ballymena Area Plan 1986-2001. The industrial zoning itself is circa. 63 ha and has already a number of planning approvals. There is, however, circa. 14.9 ha remaining land, which is the Michelin site. There appears to be no relevant planning histories for the 14.9 ha site. Interestingly, a full planning application is pending in the planning system for a waste transfer station for household and commercial waste at lands adjacent to the Michelin site (planning ref. G/2006/0899/F). There are no environmental designations that cover the site. It is directly adjacent to an existing industrial park, the Michelin factory. The site is east of the M2 motorway, and has direct access to the A26 road; there is therefore good access to the primary transport network. In addition, the site is located in close proximity to a high concentration of poultry producers. The site was scored as significant positive, as the site is within close proximity of Ballymena, and within approximately 2km of the nearest 100kv substation. In terms of the availability of a water resource, a large body of water is approximately 11-25 kms away. As such, an incinerator that uses air cooling may be more appropriate at the Michelin site.

7.2.1.2 Interestingly, Invest Northern Ireland (INI) commissioned the preparation of a study titled “Feasibility Study on a Biomass CHP Plant based on Poultry Litter & Associated Streams as a Primary Fuel”. The INI report identified an owned INI site, which adjoins the Michelin tyre factory.

Figure 11: Identified suitable lands at Michelin
7.2.2 Land Availability

7.2.2.1 The Michelin site does not currently appear to be for sale on the open market. However, there is always the potential for Rose Energy to enter into negotiations with the existing landowners, and reach an agreement on land acquisition. As this is a viable site for the proposed development, it would not be unreasonable to assume that an attractive commercial offer could be put forward.
7.3 Land Southeast of Sandholes Road, Cookstown

7.3.1 Site Description

7.3.1.1 The SE Sandholes site is approximately 6.6ha and is zoned for industrial use within the Cookstown settlement limit. There does not appear to be any relevant planning history for the site. The site has direct access onto Sandholes Road, connecting onto the A505 and A29 from which access to the motorway network is available. The site is brownfield, as there is an existing building and disused tennis courts. No environmental designations traverse the site. In addition, the location of the site within Cookstown is favourable in terms of the proximity principle, as there is a cluster of poultry producers, which have a high output in this area. The site was scored as limited negative in terms of connection to the NIE grid, as the site is within close proximity of Cookstown, but approximately 14km from the nearest 110kv sub-station. A large body of water, that is, Lough Neagh is approximately 11-25 kms away. An air cooling incinerator may be a more feasible option.

Figure 12: The SE Sandholes Site at Cookstown

7.3.2 Land Availability

7.3.2.1 The SE Sandholes site does not currently appear to be for sale on the open market. However, there is always the potential for Rose Energy to enter into negotiations with the
existing landowners, and reach an agreement on land acquisition. As this is a viable site for the proposed development, it would not be unreasonable to assume that an attractive commercial offer could be put forward.
7.4 Global Point Site

7.4.1 Site Description

7.4.1.1 The Global Point site, which lies within the Newtownabbey settlement development limit, is zoned in the Draft Belfast Metropolitan Area Plan as a major employment location, and falls within no environmental designations. The identified Global Point industrial zoned lands in the area plan comprises of 91 ha. There appears to be circa. 74 ha of available land with the southern portion owned by Invest NI. There is a disused railway track that cuts across the site in an easterly-westerly direction. The Global Point site is surrounded by a good transport infrastructure, as the main A8 road is adjacent to the site, which leads to Sandyknowes roundabout and the M2 motorway. The Global Point site is located within 10km of a concentrated cluster of poultry producers. In terms of connecting to the NIE grid, the site was scored as a positive as it is within close proximity of the Newtownabbey settlement, and approximately 6km from the nearest 110kv sub-station. Belfast Lough is within 2.6-10kms of the Global Point site, so a positive scoring was allocated in terms of water resource availability. There may be scope to accommodate an Incinerator that relies on either water, evaporative or air cooling.

7.4.2 Land Availability

7.4.2.1 Further to investigations, it is believed that the lands south of Doagh Road are owned by Invest Northern Ireland (INI). The remaining lands to the north did not appear in any estate
agency search. There may well be scope to enter into an agreement with INI, and/or the landowners to release the Global Point lands for the Rose Energy poultry litter incinerator.
7.5 Land at Far Circular, Dungannon

7.5.1 Site Description

7.5.1.1 The 7ha (approx.) site at Far Circular Road, Dungannon, is zoned industrial land within Dungannon settlement development limit and does not fall within any environmental designations, as shown in the Dungannon and South Tyrone Area Plan 2010. A desktop planning history search of the site revealed no planning history. The site is very accessible with the Far Circular Road leading directly to the A29 road, which joins the A4, providing connection to the M1 motorway. In terms of the sites proximity to waste arisings, it is located within 2.5kms of a concentrated cluster of poultry producers. Moy Park Factory is particularly close to the site. In relation to connecting to the NIE grid, the site was scored as a significant positive as the site is within close proximity of Dungannon and within approximately 2km of the nearest 275kv sub-station. The closest large body of water is Lough Neagh, which is within 2.6-10kms. An incinerator that relies on water cooling may be achievable at the Far Circular Road site subject to no negative impact on the protected Lough. Although it may be preferable to propose an air cooling Incinerator in order to avoid any negative environmental issues on Lough Neagh.

7.5.2 Land Availability

7.5.2.1 The Far Circular Road site did not appear in any desktop estate agencies searches; however, there is always scope to reach an agreement with the relevant landowner in order to release the land. An attractive commercial offer could well be put forward.
7.6 Kilroot Site, Carrickfergus

7.6.1 Site Description

7.6.1.1 The circa. 16ha Kilroot site adjacent to Kilroot Business Park is identified as a major area of existing employment/industrial use within Carrickfergus settlement development limit in the Draft Belfast Metropolitan Area Plan 2015. A desktop planning history search revealed no planning history. The site does not directly fall within any environmental designations, however, it is noted that Kilroot Stream Site of Local Nature Conservation Importance and Castle Dobbs Local Landscape Policy Area are adjacent to the Kilroot site. It is also noted that the Belfast Lough is designated as a European site (Ramsar and Special Protection Area). The site is in close proximity to the A6 main Carrickfergus to Larne road with the M5/M2 motorway in reachable distance. The site is within 10km of a clustered concentration of poultry producers. Kilroot Power Plant, which is a dominant feature in the landscape, is directly beside the subject site. Both a water cooled and air cooled incinerator may be possible at the Kilroot site. The location of the site within 0-2.5 kms of a sea lough is ideal in terms of extracting suitable levels of water subject to no negative environmental issues on Belfast Lough. Also, Kilroot power station is likely to be a major water abstractor from Belfast Lough, and so an established extractor of water exists in close proximity to the site in question. The plentiful supply of water from a sea lough, and an established nearby major abstractor of water, are further advantages to the Kilroot site.

7.6.1.2 In addition, as the subject site is directly beside Kilroot power station, then connection to the grid should be most achievable and less costly at Kilroot than any of the other 30 sites. Furthermore, the Kilroot site directly beside the power station may well have the potential for a more efficient plant, particularly, in terms of the proximity of consumers of heat. The site was subsequently given a significant positive in terms of connecting to the NIE grid.
7.6.2 Land Availability

7.6.2.1 Kilroot Business Park at Carrickfergus is currently for sale on the open market, and is therefore clearly available as an alternative site for proposing the Rose Energy Incinerator.
8 Additional Sites

8.1 Following the completion of the site selection assessment, it is clear that there are a number of additional sites, which although did not rank as highly in the scoring process as the short-listed sites in terms of their suitability, are worth your attention. These sites have ranked more suitable than the current Rose Energy planning application site at Glenavy. Further to an estate agency trawl, these sites are currently available at the time of writing. The estate agency findings are enclosed in Appendix K. These sites with their rankings for both the water resource criterion and water sensitivity criterion are listed in the table below.

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Site Location</th>
<th>RANKING (with water resource criterion)</th>
<th>RANKING (with water sensitivity criterion)</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>660 Antrim Road, Newtownabbey</td>
<td>8</td>
<td>17</td>
<td>Yes</td>
</tr>
<tr>
<td>23</td>
<td>653 – 655 Antrim Road, Mallusk, Newtownabbey</td>
<td>16</td>
<td>10</td>
<td>Yes</td>
</tr>
<tr>
<td>24</td>
<td>23 Mullaghcarton Road, Maghaberry</td>
<td>23</td>
<td>23</td>
<td>Yes</td>
</tr>
<tr>
<td>25</td>
<td>Land at Poplar Road, Crumlin</td>
<td>25</td>
<td>26</td>
<td>Yes</td>
</tr>
<tr>
<td>26</td>
<td>Land at Moira Road, Nutts Corner</td>
<td>22</td>
<td>24</td>
<td>Yes</td>
</tr>
<tr>
<td>28</td>
<td>30a Derrynonnigan Road, Cookstown</td>
<td>30</td>
<td>30</td>
<td>Yes</td>
</tr>
<tr>
<td>29</td>
<td>50A Moira Road, Nutts Corner, BT29 4JS</td>
<td>18</td>
<td>21</td>
<td>Yes</td>
</tr>
<tr>
<td>31</td>
<td>Ballyvannon Road, Glenavy (Application Site)</td>
<td>31</td>
<td>31</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Figure 16: Further available sites, which ranked as more suitable than the Glenavy application site

8.2 The above demonstrates that there is clearly more than one site that is more suitable than the Glenavy subject site to accommodate the Rose Energy incinerator proposal. Furthermore, a number of these sites are available, as they are currently for sale on the open market.
9 Conclusion

9.1 Further to carrying out the site selection assessment for an air cooled incinerator, and a water or evaporative cooled incinerator, it is very much evident that there are clearly 30 sites, which score considerably higher in terms of their suitability than the current proposed site for an Incinerator at Glenavy. The top short-listed sites included:

- Site 1 Woodside Road (North & South), Ballymena (Herein referred to as the Michelin site)
- Site 2 Land south-east of Sandholes Road, Cookstown
- Site 3 Global point/ Ballyhenry, Doagh Road, Newtownabbey (Herein referred to as the Global Point site)
- Site 4 Land at Far Circular, Dungannon
- Site 5 Kilroot site, Carrickfergus

9.2 From the short-listed suitable sites, it is clear that an air cooled incinerator could be achieved at all 5 sites whereas for a water or evaporative cooled incinerator, the most likely suitable site is at Kilroot (Site 5) due to its close proximity to the sea lough. Also, the Kilroot site has the advantage that it is directly beside a power station, which is likely to already extract water from the sea lough. The close proximity of the power station would enable less costly connection to the NIE grid, and the realistic prospect for the use of heat to consumers. It is however, realised that the Belfast Lough is a European designated site for habitats and wildlife, and so, the potential ecological impacts (and/or mitigation) may well be similar at both Lough Neagh and Belfast Lough. It is important though to point out that the Glenavy application site, which would extract water from Lough Neagh, remains lowest in the ranking order of suitable sites resulting from its poor scores across a broad range of scoring categories.

9.3 The short-listed sites could be made available subject to negotiations with the relevant landowners. Furthermore, it is not unreasonable to assume that an attractive commercial offer could be put forward. The Kilroot site is currently available on the open market. In addition to the preferred short-listed sites, there are a multitude of sites currently for sale on the open market, which although did not score as high in terms of their suitability as the above-mentioned sites, they did score and rank higher than the Glenavy application site, and are for sale on the open market.

9.4 It is reminded that this study is not intended to be an endorsement of incineration as a technology for dealing with chicken waste, rather it clearly demonstrates that if incineration is to be used, there are clearly 30 potential sites that score more highly in terms of their suitability than the current Rose Energy Glenavy site on a wide range of objective criteria.

9.5 This site selection assessment demonstrates that there are alternative solutions to the Rose Energy application site; therefore the current planning application fails the policy test set out in Paragraph 41 of Planning Policy Statement 2 (PPS 2), which highlights that “the Department must first be satisfied that there are no alternative solutions. This means that
the Department will consider whether there are, or are likely to be, suitable and available sites, which are reasonable alternatives for the proposed development, or different practicable approaches, which would have a lesser impact. In light of the above, it is encouraged that the current Rose Energy planning application is refused outright in terms of failing to comply with PPS 2.