THOMAS Mc ENERY,
BALLINTOBER EAST, NEWCASTLEWEST,
CO. LIMERICK

ENVIRONMENTAL IMPACT STATEMENT
FOR THE PROPOSED
EXPANSION OF A POULTRY FARM
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NRGE Ltd. 2
Non-Technical Summary

This document has been prepared on behalf of and for the exclusive use of Mr Thomas McEnery by NRGE Ltd. in support of a Planning Application to Limerick County Council and an IPPC Licence to the Environmental Protection Agency for the proposed development of his poultry farm at Ballintubber East, Newcastle West, Co. Limerick.

The farm operates as a contract grower for the Kantoher Poultry Producers Co-operative Society. All stock, finished poultry and waste arrangements are managed and controlled centrally by the co-op.

The farm operates under standard methodology approved by An Bord Bia and comprises of 3no poultry houses of modern design which are operated to the highest standard. The estimated annual production of poultry litter from the farm is 250 tonnes. The farm employs one farmer. The farm also gives rise indirectly to another 5 jobs in the meat processing, milking and service sector.

Soiled Water Disposal

The waste water generated at the site from the site operations is removed to the applicant’s agricultural land in accordance with S.I. No 610 of 2010 – European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2009.

Mr. Thomas McEnery will remove the soiled waters from the site to his agricultural land only. No soiled water will be removed to lands outside of the ownership of Mr. Mc Enery.

On site there is currently a 5,000 gallon precise underground effluent tank which holds all washings from poultry and soiled water from yards (Attachment 1 – Flow Path Site Plan). The tank construction conforms to the Department of Agriculture, Food and the Marine specifications S108 and S123. The proposed soiled water tanks which will be located at the front of the proposed poultry house will have a capacity of approximately 23m³. During the closed period from October 15th to January 15th, washings from underground tanks are transferred to a perma store overground tower which holds 279,000 gallons.

Poultry Litter Disposal

The poultry litter from the unit at Ballintubber East, Newcastlewest, Co. Limerick is supplied to Custom Compost of Ballyminaun Hill, Gorey, Co. Wexford (Attachment 2 Waste Acceptance Agreement), for use in the production of Mushroom Compost. The litter is removed off site the same day as shed cleaning is carried out. No litter from this farm has been used as agricultural fertiliser in the past 19 months and it is the intention of Thomas Mc Enery, to continue forwarding all litter in future for composting.
However in the event that litter from this farm has to be sent to agricultural land, there is an agreement in place with Mr. Gavin Owens of Strawchip Ltd, Ballycullane, Athy, Co. Kildare (Attachment 3 – Acceptance letter).

A register will be maintained on site, recording the date of delivery of poultry litter, the farmer’s name it was delivered to, the nutrient content, and same will be submitted to the Nitrates Division of the Dept of Agriculture at the end of the year, in the “Record 3 Format”.

**Surface Water**
The site has no river or water bodies but contains a small drainage ditch which drains the site and surrounding agricultural land. Surface water run-off from roofs and non contaminated, impervious areas on site exits the site through SW1 as indicated on the Rural Place Map Attachment 4 (grid reference 127034 N, 130311 E). A sample from this monitoring point will be taken on a quarterly basis and tested for COD at an independent laboratory.

**Existing Water Supply**
The main water supply on site is from the public scheme water. All water usage on site is metered. The farm well, indicated as FW1 on the attached Rural Place Map Attachment 4 (grid reference: 126909 N, 130461 E) is used as an emergency backup only.

**Air**
Effects of the farm on air are insignificant outside the buildings and adjoining yards. The ventilation system will ensure that foul air is dispelled high into the atmosphere where it will mix with fresher air and thus minimise odour. Mitigation measures taken will minimise the effects of odour on the days of manure spreading.

**Noise**
Noise levels from the farm are unlikely to be a nuisance. Attached is a night time Noise Monitoring Report carried out by Mr. Michael Mc Eniry of NRGE Ltd. on 22nd December 2012 (Attachment 5). Furthermore, a day time survey was carried out on 13th April 2012, results of which are laid out in section 6.
TABLE OF CONTENTS

Non-Technical Summary 3

1. Legislation Requirements 10
   1.1 Introduction 10
   1.2 Environmental Impact Assessment and Planning Legislation 10
     1.2.1 Information to be contained in an EIS 11
   1.3 Scope of the EIS 11
     1.3.1 Scenarios Investigated 12
   1.4 Identification of likely Significant Impacts 12

2. Site Layout and Construction 14

3. Alternatives 16
   3.1 Examination of possible alternatives 16
   3.2 Alternative Sites 16
   3.3 Alternative Layouts 16

4. Interactions and Inter-relationships 17

Part II – Environmental Impacts 19

Section A – Human Environment 19

5. Air Quality and Climate 20
   5.1 Introduction 20
   5.2 Methodology 20
     5.2.1 Baseline Monitoring 20
     5.2.1.1 Total Suspended Particles (Dust) 20
     5.2.1.2 Odours 20
   5.3 Description of Baseline and Air Quality 21
     5.3.1 Site Location 21
     5.3.2 Existing Sources of Air Emissions 21
   5.4 Impacts 21
     5.4.1 Dust 21
     5.4.2 Odour 21
   5.5 Mitigation measures 22
     5.5.1 Dusting 22
     5.5.2 Odour 22
   5.6 Construction Impacts and Mitigation 22
     5.6.1 Impacts 23
     5.6.2 Mitigation 23
   5.7 Monitoring 23

6. Noise 24
   6.1 Introduction 24
   6.2 Regional Environmental Settings 24
   6.3 Existing Noise Climate 24
   6.4 Survey Protocols 24
     6.4.1 Instruments and Methodology 25
     6.4.2 Survey Implementation 25
     6.4.3 Specified Noise Limits 25
   6.5 Survey Results 26
   6.6 Valuation of the Results 26
6.7 Mitigation Measures
6.8 Construction Impacts and Mitigation
   6.8.1 Impacts
6.8.2 Mitigation Measures
6.9 Monitoring

7. Landscaping and Visual
   7.1 Introduction
   7.2 Methodology
      7.2.1 Baseline Assessment
      7.2.2 Landscape
      7.2.3 Significance Assessment Criteria
   7.3 Existing Environment
      7.3.1 Ballintubber Landscape Context
      7.3.2 Landscape Setting
      7.3.3 Landscape Planning
         7.3.3.1 Inventory of Outstanding Landscapes in Ireland
         7.3.3.2 Limerick County Development 2006-2011
      7.3.4 “Do-Nothing” Scenario
      7.3.5 “Do-Something” Scenario
   7.4 Characteristics of the Proposals
      7.4.1 Introduction
   7.5 Impacts
      7.5.1 Impact Assessment
      7.5.2 Construction Phase of the new Poultry House
      7.5.3 Operational Phase
      7.5.4 Landscape Planning Impact
      7.5.5 Landscape Visual Impact Summary
   7.6 Mitigation Measures
      7.6.1 Landscape Treatments involving the existing poultry operation and its surrounds
   7.7 Residual Impacts

Section B – The Natural Environment

8. Terrestrial Environment
   8.1 Introduction
   8.2 Methodology
      8.2.1 Flora
      8.2.2 Birds
      8.2.3 Mammals, Amphibians and Reptiles
      8.2.4 Survey Limitations
   8.3 Description of Existing Environment
      8.3.1 Designated Sites
      8.3.2 Flora
      8.3.2 Birds
   8.4 Impacts
      8.4.1 “Do-Nothing”
      8.4.2 “Do Something”
         8.4.2.1 Flora
         8.4.2.2 Designated Sites
         8.4.2.3 Birds
         8.4.2.4 Mammals
10.6.2.3 Hydrogeology

10.7 Monitoring
   10.7.1 Construction Phase
   10.7.2 Operational Phase

11. Climate
   11.1 Introduction
   11.2 Methodology
   11.3 Description of Existing Environment
   11.4 Impacts
      11.4.1 “Do Nothing” Impact
      11.4.2 “Do Something” Impact

Section C – Material Assets

12.0 Material Assets – Agriculture
   12.1 Introduction
   12.2 Methodology
   12.3 Description of Existing Environment
      12.3.1 Limerick
      12.3.2 Ballintubber East
   12.4 Impacts
      12.4.1 “Do – Nothing”
      12.4.2 “Do – Something”
   12.5 Mitigation Measures
   12.6 Construction Impacts and Mitigation
      12.6.1 Construction Impacts
      12.6.2 Mitigation
   12.7 Residual Impacts

13.0 Material Assets – Natural and other Resources
   13.1 Introduction
   13.2 Description of Existing Resources
      13.2.1 Land use and Soil
      13.2.2 Transport Network
      13.2.3 Utilities
      13.2.4 ESB
   13.3 Impact and Mitigation
      13.3.1 Land and Soil
      13.3.2 Transport Network
      13.3.3 Economic Minerals
      13.3.4 Raw Materials Required
      13.3.4.1 Construction of the Poultry House
      13.3.4.2 Raw material inputs for increased poultry production capacity
   13.4 Residual Impacts

Section D – Architectural Archaeological and Cultural Heritage

National Monuments Legislation (Principles Act 1930) as amended
Local Government Planning and Development Act

14. Architectural, Archaeological and Cultural Heritage
14.1 Introduction

14.2 Methodology
   14.2.1 Desk Studies
   14.2.2 Field Inspection

14.3 Description of Existing Environment
   14.3.1 Section B – Archaeology
      14.3.1.1 Desk Survey
      14.3.1.2 Section C – Cultural Heritage

14.4 Impacts
   14.4.1 Architectural Heritage Impacts
   14.4.2 Archaeological Heritage Impacts
   14.4.3 Cultural heritage Impacts

14.5 Mitigation Measures
   14.5.1 General
   14.5.2 Architectural Heritage
   14.5.3 Architectural Heritage
   14.5.4 Cultural Heritage

14.6 Construction Impacts and Mitigation

14.7 Residual Impacts

15. Attachments

Attachment 1 Flow Paths
Attachment 2 Waste Acceptance Agreement
Attachment 3 Gavin Owens Letter
Attachment 4 Rural Place Map
Attachment 5 Night-time Noise Survey and Day-time monitoring Locations
Attachment 6 Site Plan/ Site Layout/ Designated Maps
Attachment 7 Location Maps
Attachment 8 Rodent Baiting Locations and Weekly Inspection Checklist
Attachment 9 Properties within 400meters
Attachment 10 Appropriate Assessment Screening
Attachment 11 Aquifer Classification GSI
Attachment 12 Groundwater Vulnerability GSI
Attachment 13 Recorded Monuments

Tables
Table 1.1 General Criteria used to quantify the Potential Impacts of the Proposed Scheme
Table 4.1 Summary of Potential Interactions / Inter-relationships
Table 6.1 Noise Monitoring Locations during Baseline Survey
Table 6.2 Daytime Environmental noise survey at site on 13th April 2012. (During operational hours)
Table 11.1 2010 and 30-year average meteorological conditions from Shannon Airport
Table 14.1 Architectural Heritage Sites in the Vicinity of the proposed Development
1. LEGISLATIVE REQUIREMENTS

1.1 INTRODUCTION

This chapter broadly describes the legislation under which Thomas Mc Enery’s proposal to expand the existing poultry operation is presented. The planned development will require submission of a Planning Application to Limerick County Council, together with an Environmental Impact Statement. In addition, there is a requirement for Mr. Thomas Mc Enery to apply for an Integrated Pollution Prevention and Control (IPPC) Licence by the EPA, and this application was lodged with the Agency.

1.2 ENVIRONMENTAL IMPACT ASSESSMENT AND PLANNING LEGISLATION

This Environmental Impact Statement (EIS) has been prepared in accordance with the requirements of the European Communities (Environmental Impact Assessment) Regulation, 1989 to 2001, the Planning and Development Act 2000 and the Planning and Development Regulations 2001. This legislation requires the assessment of the effects of certain public and private projects on the environment.

The developer is obliged to have an EIS carried out as part of the planning application under the following regulations:

1. EC (Environmental Impact Assessment) Regulations 1989, Article 24, Schedule Part II, 1. (d) “Poultry rearing installations where the capacity would exceed 100,000 units, where units have the following equivalents: 1 broiler = 1 unit, 1 layer, turkey or other fowl = 2 units”.

2. Planning and Development Regulations 2001 (S.1.No 600 of 2001)

3. These regulations state that even if the development is under the relevant EIS threshold the planning authority is required under Article 103 to request an EIS where it considers that the proposed development is likely to have significant environmental effects.

4. Section 17: An EIS is required for “installations for the intensive rearing of poultry or pigs with more than (a) 85,000 places for broilers 60,000 places for hens.”

The document Guidelines on the information to be contained in the Environmental Impact Statements 2002 and Advice Notes on Current Practice (in the Preparation of Environmental Impact Statements) 2003 as prepared by the EPA were followed in the preparation of the EIS.

The guidelines state that in preparing an EIS, the Developer will carry out an analysis of the likely effects of the project (positive or negative) on the environment. The Environmental Impact Assessment procedure commences at the project design stage when the scope of the study is determined. Studies are then carried out to investigate in detail, any potential environmental impacts. Where significant adverse impacts are identified, measures are recommended to mitigate or avoid the impact of the proposed Development.

This Environmental Impact Statement (EIS) examines the potential significant impacts of the proposed expansion of the poultry operation at Ballintober East, Newcastle West, Co. Limerick. The extent of the proposed Scheme is described in detail in Chapter 2. The potential environmental impacts of the proposed scheme are addressed in Chapters 3 – 14 of this volume of the report under the headings Human Environment, Natural Environment, Material Assets and Architecture, Archaeology and Cultural Heritage.

NRGE Ltd. 10
1.2.1 Information to be contained in an EIS

Schedule 6 of the Planning and Development Regulations 2001 specifies the information to be contained within an EIS and this includes:-

1. (a) A description of the proposed development, comprising information on the site, design and size of the proposed development.
   (b) A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects.
   (c) The data required to identify and assess the main effects which the proposed development is likely to have on the environment.
   (d) An outline of the main alternatives studied by the developer and an indication of the main reasons for his or her choice, taking into account the effects on the environment.

2. Further information, by way of explanation of the information referred to in paragraph 1, on the following matters:-
   (a) (i) a description of the physical characteristics of the whole proposed development and the land-use requirements during the construction and operation phases.
   (ii) a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used.
   (iii) an estimate, by type and quantity, of expected residues and emissions (including water, air, and soil pollution, noise, vibration, light, heat and radiation) resulting from the operation of the proposed development.
   (b) A description of the aspects of the environment likely to be significantly affected by the proposed development, including in particular
      - human being, fauna and flora
      - soil, water, air, climate factors and the landscape
      - material assets, including the architectural and archaeological heritage,
      - the cultural heritage,
      - the inter-relationship between the above factors
   (c) A description of the likely significant effects (including direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative) of the proposed development on the environment resulting from:
      - the existence of the proposed road development
      - the use of natural resources
      - the emission of pollutants, the creation of nuisance and the elimination of waste and
      - a description of the forecasting methods used to assess the effects on the environment:
   (d) An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the developer in compiling the required information.

1.3 SCOPE OF THE EIS

Scoping is an essential part of the preparation of an EIS as it ensures that all potential and important significant impacts on the receiving environment are taken into account at the earliest possible time. Scoping by its very nature will evolve with the project as design changes are made and more detailed information on environmental issues and design comes to hand. However, as an early stage tool it provides relevant information on the most important potential impacts of the project, which will have to be addressed in the EIS.

NRGE Ltd. 11
regard to EPA criteria for scoping, the environmental areas that may be impacted by the proposed scheme were identified and are:-

**Human Beings**
During scoping, particular regard was given to the potential impact of the expansion to the poultry growing operation on the local communities.

**Natural Environment**
The site of the existing poultry operation and the proposed extension is located in an area of poor ecological value. The site is not located or boarding any sensitive ecological area including Special Area of conservation or Special Protection Area.
The impacts on these land and plant contained within must be assessed with care to ensure that all impacts are clearly identified and where possible removed, reduced or minimised to a satisfactory level.

**Material Assets**
This involves aspects impacted by land take for the proposed scheme and available resources such as soils, utilities etc. The development will be constructed primarily on “Greenfield” site in land currently owned by Mr. Thomas Mc Enery, adjacent to his existing farm yard complex.

**Architecture, Archaeology & Culture Heritage**
The site is located in an area of improved agricultural grassland, and is of low potential with regard to archaeological and other cultural heritage finds.

1.3.1 **Scenarios Investigated**
A number of different scenarios have been examined when determining likely significant impacts.

The “do nothing” scenario which compares the quality of the existing receiving environment with that of the likely environment should the proposed scheme not be built.
The “do something” scenario which compares the quality of the existing receiving environment with that of the likely environment should the proposed scheme be built.

1.4 **IDENTIFICATION OF LIKELY SIGNIFICANT IMPACTS**
Schedule 6 of the Planning and Development Regulations requires that the EIS describes likely, direct and indirect significant impacts of a proposed scheme. The EPA (Guidelines on the information to be contained in Environmental Impact Statement 2002) defines an impact as “the degree of change in an environment resulting from a development” and goes on to elaborate on impacts in terms of quality (positive, neutral or negative), significance (imperceptible, slight, moderate, significant or profound), duration (temporary, permanent, short-term or long-term) and type (cumulative, indeterminable, irreversible, residual, synergistic or “worse case”).
The following factors have been considered for this EIS when determining the significance of the impacts, both positive and negative, of the proposed scheme on the various aspects of the receiving environment:

- The quality and sensitivity of the existing/baseline receiving environment.
- The relative importance of the environment in terms of national, regional, or local importance.
- The degree to which the quality of the environment is enhanced or impaired.
- The scale of change in terms of land are, number of people impacted, number and population of species affected including the scale of change resulting from all types of impacts.
- The consequence of that impact/change occurring.
- The certainty/risk of the impact/change occurring.
- Whether the impact is temporary or permanent.
- The degree of mitigation that can be achieved.

The magnitude of the impacts outlined in the chapters which follow, take into account the guidelines given by the EPA and those scales used in other EIS documents for significant developments in this country. A broad outline of the scale of impacts is given in Table 1.1.

Where mitigation in the form of design measures have been suggested throughout the evolution of the EIS, these have been incorporated into the scheme design as far as is possible from an engineering perspective.

**Table 1.1 General Criteria used to quantify the Potential Impacts of the Proposed Scheme**

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<td>Profound</td>
<td>Significant Impact</td>
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<td>An impact, which obliterates sensitive characterisation</td>
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<tr>
<td>Major</td>
<td>An impact, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.</td>
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<tr>
<td>Moderate</td>
<td>An impact that alters the character of the environment in a manner that is consistent with existing and emerging trends</td>
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<tr>
<td>Slight</td>
<td>An impact, which causes noticeable changes in the character of the environment without affecting its sensitivities</td>
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<tr>
<td>Not significant</td>
<td>Neutral or imperceptible impact</td>
</tr>
<tr>
<td>An impact which does not change the quality of the environment is capable of being measured but without noticeable consequences and causes changes in the character of the environment which are not significant or profound</td>
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2. SITE LAYOUT AND CONSTRUCTION

The total area of the site, incorporating existing and proposed areas is 1.5 Hectares. The proposed poultry units would be situated approximately 15m North West of the existing houses and approximately 350m from the public road (Attachment 6 – Site Plan and Attachment 7 – Location Map). The new proposed poultry house development would have a capacity of approximately 35,000 birds and the house dimensions would be 60’ X 350’. The maximum height of the proposed houses would be approximately 4m to apex.

The proposed development is located adjacent to an existing poultry farm in the town land of Ballintober East, Newcastle West, Co Limerick. (Grid Reference E530448 N627046), accessed by 400m of a private lane from the public road, which is 1.7Km from the R522 (Newcastle West to Buttevant road).

The current capacity of the existing farm is 56,000 birds. The proposed new house has a capacity for 35,000 birds. Currently the oldest house on site has a capacity for 11500 birds, and this house will be converted to a store, no longer used for the housing of birds. As a result the new capacity of the farm will be 79,500 birds.

The proposed soiled water tanks will be located at the front of the proposed poultry house and will have a capacity of approximately 23m³.

The site boundary is marked by hedgerows with fencing in some parts. The existing entrance located at the southern boundary would facilitate the proposed and existing houses as indicated in the Site Layout Plan (Attachment 6).

Drainage
All run-off water from the site is collected via the storm-water collection system SW1 as indicated in Attachment 4 and monitored quarterly for COD. All wash water will be contained in the onsite storage tanks.

Foundation
The proposed poultry house, as with existing houses, would be constructed on an impermeable concrete foundation, to be laid by the developer or a hired subcontractor. This phase would take approximately two to four days.

Housing
The building and its layout will be state of the art for the industry. A thorough review was undertaken of the best available techniques to minimise emissions from the proposed development, and to maximise welfare conditions for animals and staff alike on site. Construction materials will include hardcore for the base followed by concrete floor and concrete walls, the poultry house itself will consist of timber panelling timber beams insulated with fibre glass and the house will be coated with a light aluminium coat.

Roofing
The roofing will be an insulated timber construction, with an aluminium surface.

Wash Tanks
On site there is currently a 5,000 gallon precise underground effluent tank which holds all washings from poultry houses and soiled water from yards. The tank construction will conform to the Department of Agriculture, Food and Forestry’s Specification No. 123 “Minimum Specification Slatted Livestock Units: Reinforced Concrete Tanks” DAF, 1994.
Poultry Litter
The poultry litter from this unit is supplied to Custom Compost of Ballyminaun Hill, Gorey, Co Wexford (Attachment 2 – Waste Acceptance Agreement), for use in the production of Mushroom Compost. The litter is removed off site on the same day as shed cleaning is carried out. No litter from this farm has been used as agricultural fertilizer in the past 12 months, and it is intended to forward all litter in future for composting.

In the event that litter from this farm has to be sent to agricultural land, there is an agreement in place with Mr. Gavin Owens of Strawchip Ltd, Ballycullane Athy Co Kildare (Attachment 3). The application of poultry litter to farmland is now regulated under S.I. No. 610 of 2010 and distribution of poultry litter from this farm will comply with those regulations. This facility is entitled to supply poultry litter to a farmer who wants it, and is obliged to record all dispatches from the holding. The farmers acquiring poultry litter are also obliged to record all consignments acquired and to use it in compliance with the regulations. Poultry litter will not be supplied to customer farms between 15th October and 15th January in any year except with the consent of the local authority, or any other relevant authority. Outside that period, poultry litter will be supplied from the site to a customer farmer, only in response to an order. Managed and used in this way, poultry litter produced at this facility will not have any adverse impact on environmental parameters either inside or outside the site.

A register will be maintained on site, recording the date of delivery of poultry litter, the farmer’s name it was delivered to, the nutrient content, and same will be submitted to the Nitrates Division of the Dept of Agriculture at the end of the year, in the “Record 3 Format”.

Feed Silo
On completion of construction works, feed silos (Approx 7.6m high, 3.0m diameter) will be installed and will be placed adjacent to the new houses.

Heating
Gas Heating will be installed in each poultry houses.

Feeding/Drinking Apparatus
An auger style feeding system and nipple-type drinkers will be installed in each unit. See Figures 5 and 6 for a description of the location of proposed housing. Construction works are expected to occur over duration of approximately one month. The extra traffic and noise generated will be only temporary. Complaints are not expected from those living in and travelling through the area.

Rodent Baiting Locations
It is important to control vermin and rodents and other pests in the farmyard to prevent disease spread particularly by contamination of feedstuffs. In accordance with An Bord Bia standards, each producer must operate and maintain an effective rodent control programme in the farmyard.

Currently there are nineteen baiting boxes placed around the site, indicated by yellow boxes in the enclosed Grower Site Plan (Attachment 8).

The number of baiting boxes will increase as per the construction of the proposed house. The following requirements will be implemented at Thomas McEnery’s Poultry Unit:
• A site map identifying the locations of the bait points (to be updated pending construction of the proposed building). All baiting boxes will be secured, numbered and clearly indicated on this site map.
• Where baiting supplies are stored on site, the store will be kept locked.
• Inspections for pest control will be made and recorded on a weekly basis. Enclosed is a copy of the records kept with regards to Rodent Control as of 18th/19th December 2012 (Attachment 8).
• All air vents and intake points will be covered with a 1.2mm screen to prevent pests from entering the houses.
• An annual review of the Rodent Management Plan will be carried out to ensure that it is suitable for the unit and is working correctly.

3. ALTERNATIVES

3.1 EXAMINATION OF POSSIBLE ALTERNATIVES

Schedule 6, Article 94 of the Planning and Development Regulations 2001 requires that:

Information to be contained in an Environmental Impact Statement shall include –

(1d) an outline of the main alternatives studied by the developer and an indication of the main reasons for his or her choice, taking into account the effects on the environment.

3.2 ALTERNATIVE SITES

A review of Thomas McEnery’s owned property reveals that this is the only available suitable site for the construction of the proposed new poultry growing unit. Acquiring property further away from the existing poultry operation has been ruled out as:

- Construction costs would be more expensive as the proposed expansion of the poultry growing operation would be connected into the existing infrastructure, thus avoiding duplicate costs of constructing new feeding water and heating systems, electrical infrastructure and access.

- Operation costs would be more expensive as addition feed silos and pumping distances would be greater and electricity infrastructure would have to come from existing National Grid as opposed to existing on site electrical infrastructure.

3.3 ALTERNATIVE LAYOUTS

The layout of the site was considered for the proposed additional poultry houses to minimise the operational cost of the development and consider animal welfare. However, the footprint of the additional poultry is subject to a number of physical constraints. The site of the extension is restricted to land already in the ownership of Thomas McEnery.

The proposed location was considered the best viable option due to the avoidance of disturbance of the birds during delivery and collection. The proposed location will aid the screening of the proposed poultry houses with the existing hedgerows will be retained where possible.

The proposed location was deemed best suited to the location of the additional proposed poultry house as it is buffered by 350-400m from the public roadway, and third party dwellings.
4. INTERACTIONS AND INTER-RELATIONSHIPS

In line with requirements of EC Directive 85/337/EC (as amended) and the Planning and Development Regulations 2001, the interactions/inter-relationship between the various environmental factors was also taken into account as part of the EIS scoping and assessment. Where a potential exists for interaction between two or more environmental topics, the relevant specialists have taken the potential interactions into account when making their assessment and where possible complementary mitigation measures have been proposed. These interactions are discussed and summarised in Table 4.1.

To fully explain what is meant by an inter-relationship or interaction between environmental topics an example is provided. Noise can interact with a number of environmental aspects. Noise issues primarily feature under the heading of Human Environment and most of the standards and guidelines on noise relate exclusively to human beings. However, noise can impact on terrestrial fauna such as birds and material assets in the form of commercial livestock and so it must be taken into account as part of the agricultural and ecological assessment also.

Table 4.1 Summary of Potential Interactions/Inter-relationships

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>Interaction with</th>
<th>Interaction/inter-relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>Human beings</td>
<td>Air quality is not a concern both at the local community level and on a broader national/global scale. In terms of the proposed poultry housing, dust (both during the construction phase) and its impact on the communities and residents adjacent to the poultry housing will be the main issue.</td>
</tr>
<tr>
<td>Flora &amp; Fauna</td>
<td>Vegetation can act as a purifier for air in absorbing $CO_2$ and giving out oxygen. Dust could affect fauna during construction phase.</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>No interactions/Inter-relationships</td>
<td></td>
</tr>
<tr>
<td>Soils</td>
<td>Dust from exposed soils during construction could cause deterioration of air quality in the immediate vicinity of the development</td>
<td></td>
</tr>
<tr>
<td>Climate</td>
<td>Local heating of air in the poultry houses of embankments could cause microclimate change in those areas.</td>
<td></td>
</tr>
<tr>
<td>Material Assets</td>
<td>No interactions/Inter-relationships</td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>Human Beings</td>
<td>Sensitive receptors located close to the proposed extension may experience some increase in noise particularly during the construction stage.</td>
</tr>
<tr>
<td>Flora &amp; Fauna</td>
<td>Construction proposals could result in significant noise disturbance which may impact on the birdlife currently using the area.</td>
<td></td>
</tr>
<tr>
<td>Material Assets</td>
<td>No Interactions/Inter-relationships</td>
<td></td>
</tr>
<tr>
<td>Landscape</td>
<td>Human beings</td>
<td>The proposed development will have a minor actual and perceived landscape appearance in the area and directly impact on the local community and adjacent residences.</td>
</tr>
<tr>
<td>Flora &amp; Fauna</td>
<td>A small loss of hedgerow will occur and these are very important as wildlife corridors for animals. Improvement of the remaining hedgerow will be conducted post development</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>No Interaction/Inter-relationships</td>
<td></td>
</tr>
<tr>
<td>Soils</td>
<td>Movement of significant quantities of soil from one area of another can affect the appearance of the landscape. This will be necessary as part of the construction when material is removed from the construction zone.</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Material Assets</td>
<td>No interactions/Inter-relationships</td>
<td></td>
</tr>
<tr>
<td>Flora &amp; Fauna</td>
<td>Human beings</td>
<td>There will be minor impact on the fauna and flora of the area as they suffer habitat loss and dislocation due to the proposed scheme.</td>
</tr>
<tr>
<td>Water</td>
<td>During construction there is a minor risk of disturbance of drainage channels need special precautions to avoid disturbance of sediments with consequent effects on fauna.</td>
<td></td>
</tr>
<tr>
<td>Soils</td>
<td>Stabilisation methods for soft soil area could alter the pH balance with consequent change in flora cover and species of fauna supported.</td>
<td></td>
</tr>
<tr>
<td>Climate</td>
<td>No Interactions/Inter-relationships</td>
<td></td>
</tr>
<tr>
<td>Material Assets</td>
<td>Land take will cause some local loss of range area for terrestrial fauna</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>Human Beings</td>
<td>No Interactions/Inter-relationships</td>
</tr>
<tr>
<td>Soils</td>
<td>Rainfall runoff waters could cause deterioration of water quality of streams</td>
<td></td>
</tr>
<tr>
<td>Material Assets</td>
<td>No Interactions/inter-relationships</td>
<td></td>
</tr>
<tr>
<td>Soils</td>
<td>Human Beings</td>
<td>Dust from exposed soils during the construction period can cause dust nuisance if not properly mitigated.</td>
</tr>
<tr>
<td>Material Assets</td>
<td>Extraction, movement and placing of soils will have an energy input requirement.</td>
<td></td>
</tr>
<tr>
<td>Climate</td>
<td>Human Beings</td>
<td>No interactions/Inter-relationships</td>
</tr>
<tr>
<td>Material Assets</td>
<td>No Interactions/Inter-relationships</td>
<td></td>
</tr>
<tr>
<td>Material Assets</td>
<td>Human Beings</td>
<td>Current land-use will be permanently altered including the loss of ecological habitat and farmland.</td>
</tr>
</tbody>
</table>
PART II - ENVIRONMENTAL IMPACTS

This section of the EIS describes the likely significant Environmental impacts arising from the proposed extension to the poultry rearing operation at Ballintober East, Newcastle West, Co. Limerick. Where possible, design measures have been included to reduce or eliminate possible impacts but where this has not been possible, mitigation measures have been suggested to reduce or eliminate the identified impacts of the proposed development.

SECTION A - HUMAN ENVIRONMENT

This section of the Environmental Impact Statement deals with the potential effects of the proposed scheme on human beings.

These effects have been grouped into:-

- Community Impact – the direct or indirect impact of the scheme on the population living or working in the general vicinity of the proposed poultry rearing operation at Ballintober East, Newcastle West, Co. Limerick.

- Air Quality Impacts – the impact of emissions generated by the proposed poultry rearing operation at Ballintober East, Newcastle West, Co. Limerick

- Noise and Vibration Impacts – the impact of noise and vibration generated by the Scheme on noise and vibration levels in the general vicinity.

- Landscape and Visual Impacts – the impact of the scheme on the aesthetic aspect of the landscape.

While human beings interact in some way with every aspect of the environment, the above interactions are considered the most significant in this case. The impacts on human beings in relation to effects on the natural environment are considered in Section B while the impacts of effects on material assets and architecture, archaeology and cultural heritage are considered in Section C and D respectively.
5. AIR QUALITY AND CLIMATE

5.1 INTRODUCTION

The air quality study identifies, describes and assesses the impact of the proposed extension to the poultry growing operation on air quality and climate. Particular attention has been given to sensitive receptors, such as residential areas adjacent to the site and to the extent of the exposure of these receptors to airborne pollutants derived as a result of the development. This assessment was prepared in accordance with the EPA document – Guidelines on the information to be contained in an Environmental Impact Statement (2002).

5.2 METHODOLOGY

5.2.1 Baseline Monitoring

5.2.1.1 Total Suspended Particles (Dust)

Dust generation, dispersion and deposition from operation and construction activities are typically considered an environmental nuisance for sensitive receptors in the vicinity of the development. The potential sources of dust in the proposed development are from trafficking and strong winds in dry conditions, leading to suspension of dried soil particles from the proposed extension to the poultry growing operation. Earthworks during the extension construction are also a potential source of dust pollution.

As there are no set limits for dust deposition in Ireland, the TA Luft Guidelines are referenced. TA Luft is the German Government technical instructions on air quality and referenced by the Irish EPA. Dust deposition monitoring using Bergerhoff-Gauges would be the recommended standard method meeting TA-Luft (1986) requirements. However, no monitoring was conducted at Thomas Mc Enery’s poultry growing operation as it would be considered that there is a minor risk of deposited dust level exceeding the TA Luft levels, due to the isolated rural location of the proposed development.

5.2.1.2 Odours

Mr. Mc Enery is committed to operating the existing facility to best practice. The proposed poultry house will have the best available water and feeding systems and following construction of this house Mr. Mc Enery plans to modernise the existing poultry house with the same water and feeding systems. The key requirements for the odour from poultry operation are:

- Avoiding the build-up of slurry or manure on concrete around buildings
- Removal and disposal of dead animals
- Drain maintenance
- Bedding cleanliness
- Management of drinking systems, with particular emphasis on frequently adjusting nipple and drip cups to bird eye level to avoid spillage and wet litter
- Stocking density
- Litter moisture content
- Insulation of the building and the long term maintenance of that insulation
- Ventilation and heating system
- Type of heating
- Composition of the feed particularly its oil and fat content and its protein content.
Mr. Mc Enery has never received a complaint directly in relation to his poultry operation from a local resident, Local Authority EPA, HSE etc.

As part of the Odour management plan Mr. Mc Enery is committed to doing whatever is necessary to avoid complaints and even that is the installation of odour abatement technology such as bio-scrubber or bio-filters. The need for such abatement technology is an indication the good management practices are failing. Mr. Mc Enery’s poultry farm has a good record with Bord Bia audits and other audits such as Entegra (UK) audit.

Although odour generated in the operation may be more detectable at certain times, as partly influenced by prevailing weather conditions, the townland and surrounding townlands are well accustomed to occasional odour from this type of operation. This in mind however, odour levels generated are not expected to cause a significant nuisance in the surrounding area, as the operation will be management to the best possible level.

5.3 DESCRIPTION OF BASELINE AIR QUALITY

5.3.1 Site Location

The location of the proposed development at Thomas Mc Enerys poultry growing operations is at Ballintober East, Newcastle West, Co. Limerick. The site is located 7.5 km to the South East of Newcastle West, Co Limerick approximately 35km South West of Limerick City. The R522 is located 1.5 Km from the site, connecting to Newcastle West. The site will be the only IPPC licensed site within five kilometres.

5.3.2 Existing Sources of Air Emissions

The town of Newcastle West is located approximately 7.5 km South East of Mr. Thomas Mc Enery’s poultry operation. The main source of air pollution would arise from domestic and commercially fuel combustion. Emissions from oil combustion include mainly carbon monoxide, nitrogen oxides, sulphur dioxide and particulates as well as greenhouse gases. This facility with its existing poultry houses has an existing impact to air quality as a result of emissions from combustion of LPG to heat the houses.

5.4 IMPACTS

5.4.1 Dust

Dust levels generated by the development, both in the construction and operational phase, would be negligible. Thorough cleaning of the houses between batches will ensure that the emission of dust will not be an issue. Minimal levels of dust will be generated, as is to be expected, during the construction phase. Such dust will only be evident on the site and will not impact on dwellings and other buildings in the vicinity of the site. Which are situated far enough from the operation so as not to be effected by any dust generated. Regular washing of the yard areas and periodic rainfall will also mitigate any dispersal of dust generated by site traffic. An adequate ventilation system employed in the houses will ensure no nuisance of dust within the houses. Any dust dispersed around the yard areas as a result of the ventilation systems in the houses will be cleaned up regularly and will not cause any problems off site.

5.4.2 Odour

Currently on site, odour minimisation is kept to the absolute minimum as even though the poultry site is 400-500m from neighbours, Mr Mc Enerys own dwelling is in close proximity to the proposed development (Attachment 9 – Property locations).
5.5 MITIGATION MEASURES

5.5.1 Dusting

During the operational and construction phase of the poultry growing facility all efforts will be made to ensure no dusting occurs. Top soil will be removed off-site and stored appropriately.

5.5.2 Odour

The Odour Management plan is Mr. Mc Enerys statement of intent of how odours will be managed from the proposed and existing site. The following is the current cleaning/washing regime.

(i) All doors closed in houses until final extraction of birds has taken place.

(ii) The litter from the operation is removed from the houses and loaded onto the articulated trailers for instant removal to Athy, Co. Kildare for land spreading or to Custom Compost/Walsh Mushrooms, Ballyminaun Hill, Gorey, Co. Wexford for composting. This is a same day activity.

All litter produced on-site in the past 18 months has been recovered in this manner. The proposal is to continue doing so, as all participants are satisfied with this setup.

No litter is left or stored on site.

(iii) Power hosing Contractors arrive on site on same day as litter is removed and they begin a strict washing programme and disinfectant programme.

(iv) All tankers, feed lines, fans are power hosed first, followed by ceilings, walls and floors.

(v) Houses are disinfected with a high solution, doors are then closed to let dry.

(vi) Washings from cleaning of poultry houses are kept in a 5,000 gallon underground storage tank.

(vii) Water minimisation is kept to a minimum due to the cost of pumping water to wash houses. Approximately 100 gallons are used to clean houses.

No complaints of odour or dust have been received in relation to the existing poultry houses, therefore the commissioning of an additional poultry house is not expected to cause a nuisance in the surrounding locality.

In the event that an odour nuisance is occurring from the poultry litter, the mitigation measure will be the use of a masking agent which is a chemical component in an open-air spray specifically designed to mix with the fugitive odour. These masking agents typically have pleasant odours designed to “mask” the unpleasant odour.

5.6 CONSTRUCTION IMPACTS AND MITIGATION

It is proposed to use local source rock and concrete for the supply of rock fill and processed aggregate. The facility roads are constructed of rock fill and topped with fine aggregates.
5.6.1 Impacts

Construction activities e.g. excavations, earth moving etc. may generate quantities of construction dust, particularly in drier weather conditions. The extent of any construction dust generation depends on the nature of the construction dust (soils, sands, gravels, silts etc.) and the construction activity. The potential for construction dust dispersion depends on the local meteorological facts such as rainfall, wind speed and wind direction.

The issue of construction dust dispersion may be exaggerated with vehicles transporting sand/gravels/soils etc. to and from the site having the potential to cause an environmental nuisance.

The effect of construction activities on air quality, in particular construction dust, will not be significant following the implementation of the proposed mitigation measures outlined below. The main environmental nuisance associated with construction activities is dust.

5.6.2 Mitigation

It is proposed to adhere to good working practices and dust mitigation measures to ensure that the levels of dust generated will be minimal and are unlikely to cause any environmental nuisance.

Hard surface roads shall be swept to remove mud and aggregate materials from their surface.

Any un-surfaced roads shall be restricted to essential site traffic only.

Public roads outside the site shall be regularly inspected for cleanliness, and cleaned as necessary.

Material handling systems and site stockpiling of materials shall be designed and laid out to minimise exposure to wind.

Diesel engines of plan machinery and trucks shall be properly maintained so that they do not discharge excessive quantities of visible smoke likely to result in a local nuisance.

5.7 MONITORING

There is no proposed monitoring for dust or odour at the Poultry growing operation. If any complaints are received, a follow-up investigation will be initiated. This will be initiated as soon as feasible and all results made available to the Local Authority and EPA for inspection.

In the event that dust or odour from the proposed development is creating an environmental nuisance. An ambient dust deposition survey will be carried out by an aid quality specialist and mitigation measures will be developed to eliminate the nuisance. In the event of Odour nuisance an investigation following the EPA Air Guidance on Odour Assessment (AG5) will be initiated.
6. NOISE

6.1 INTRODUCTION

This report presents the results of the baseline noise survey and assessment which was conducted at the site of the proposed development at Ballintober East, Newcastle West Co Limerick. NRGE Ltd personally conducted a Noise Survey on the Site on 13th April 2012 during operational hours and also a night time survey carried out on 22nd December 2012. Details of the night time survey are included in Attachment 5.

The study identifies describes and assesses the impact of the proposed extension in terms of noise. In particular the potential noise impacts on residential locations (sensitive receptors) in the vicinity of the proposed development are assessed. Noise is a feature of most structural developments particularly during the construction phase, as will be the case during the proposed development of this poultry farm. In addition noise will be generated during the normal day to day running of this farm by the checking of stock, water and feed systems and delivery of feed etc.

6.2 REGIONAL ENVIRONMENTAL SETTINGS

The site is located 7.5 km to the South East of Newcastle West, Co Limerick approximately 35km South West of Limerick City. The R522 is located 1.5 Km from the site, connecting to Newcastle West. The closest residence to the poultry farm is approximately 150-200m from the proposed new house, which is the developer own private residence. The nearest third party residence is located 400m due West of the proposed new house. There is significant noise mitigation at this site, due to the existence of natural hedgerows around the site.

6.3 EXISTING NOISE CLIMATE

There are no significant dominant noise sources in the region as the local area is rural and not influenced by any local industry. The general noise climate in the hinterland of this poultry farm is relatively low. General practises at this site include normal farm operations such as site traffic, including delivery of feed and collection of birds and litter. In addition operations on site include the feed and water systems.

The noise measurements were taken at the site boundary of the existing farm operation, adjacent to the developers own residence, (approximately 150m from the proposed new site) and at the junction with the public road approximately 400m distant from the proposed new site.

6.4 SURVEY PROTOCOLS

Monitoring Locations - The monitoring locations were determined according to the guidelines in ISO 1996 – Acoustics - Description and Measurement of Environmental Noise and the EPA publication, “Environmental Noise Survey, Guidance Document” Noise measurements were taken at three locations at adjacent noise sensitive locations. The noise measurements were taken at the site boundary of the existing farm operation, adjacent to the developers own residence, (approximately 150m from the proposed new site) and at the junction with the public road approximately 400m distant from the proposed new site. See Table 6.1.
Table 6.1 Noise Monitoring Locations during Baseline Survey 13th April 2012

<table>
<thead>
<tr>
<th>Monitoring Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>Site boundary of existing operation approximately 150m from the developers own private residence.</td>
</tr>
<tr>
<td>N2</td>
<td>In yard of existing farm residence approx. 150m distance from the proposed development</td>
</tr>
<tr>
<td>N3</td>
<td>At junction with public road, adjacent to third party dwelling approximately 400m from proposed development</td>
</tr>
</tbody>
</table>

6.4.1 Instrumentation and Methodology

Noise measurements were made according to the requirements of ISO 1996; Acoustics-Description and Measurement of Environmental Noise and in addition, with reference to the 2006 EPA Publication, Environmental Noise Survey Guidance Document. The measurement was made using a Bruel & Kjaer 2260 Data logging integrating sound level meter.

6.4.2 Survey Implementation

The survey during operational hours of the existing farm operation was conducted on the 13th April 2012 during periods when the farm was operating under normal conditions. The measurement parameters included meteorological measurements and Observations of prevailing conditions at the time of the survey. The main noise Measurement parameter was the equivalent continuous A –Weighted Sound Pressure Level, $L_{Aeq,T}$. Noise levels at the site boundary locations were measured over 30 Minute measurement intervals during the day time period. A statistical analysis of the Measurement results was also completed so that the percentile levels, $L_{AN,T}$ for $N=90\%$ and $10\%$ over the measurement intervals were also recorded. The percentile levels represent the noise level in dB (A) exceeded for N % of the measurement time.

6.4.3 Specified Noise Limits

Farm sites such as this whereupon this development is proposed which operate above the threshold requirements of the EPA are required to comply with conditions which stipulate that operating noise levels should not be exceeded at noise sensitive locations surrounding the site. The following sound pressure limits are set down by the EPA:-

Daytime: $55\text{dB(A)}$ ( $L_{Aeq(1h)}$)  
Night time: $45\text{dB(A)}$ ( $L_{Aeq(1h)}$)

For clarification daytime is normally defined as 08:00 to 22:00 and night time is usually defined as 22:00 to 08:00.
6.5 SURVEY RESULTS

The results for the environmental noise survey are reported in Table 6.2.

Table 6.2 Daytime Environmental noise survey at site on 13th April 2012. (During operational hours)

<table>
<thead>
<tr>
<th>Monitoring Location</th>
<th>Time</th>
<th>( L_{Aeq} ) 15min dB(A)</th>
<th>( L_{A90} ) 15min dB(A)</th>
<th>( L_{A10} ) 15min dB(A)</th>
<th>Major Noise Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1</td>
<td>12:13:00 - 12:45:00</td>
<td>44</td>
<td>48</td>
<td>41</td>
<td>Slight background noise</td>
</tr>
<tr>
<td>N2</td>
<td>14:32:00 - 15:02:00</td>
<td>41</td>
<td>45</td>
<td>39</td>
<td>No major noise sources</td>
</tr>
<tr>
<td>N3</td>
<td>15:12:00 - 15:42:00</td>
<td>46</td>
<td>49</td>
<td>42</td>
<td>local traffic impact mainly, Vehicles passing on main road</td>
</tr>
</tbody>
</table>

6.6 VALUATION OF THE RESULTS

The recorded noise levels during the survey on the 13th April, 2012 recorded levels between 39 dB(A) and 49 dB(A). The background noise levels in the area are generally descriptive of rural environment with L90 values below 40dB(A).

At location N1, there was no significant site noise audible.
At location N2, the noise level recorded was not significant.
At location N3, there was intermittent local traffic which influenced the ambient levels.

6.7 MITIGATION MEASURES

During the operation of the poultry farm, noise levels recorded are within the EPA noise levels criteria, as per measurement taken at existing site boundary. It is envisaged that the noise levels will not increase with the proposed development.

New mitigation measures are therefore proposed during the operation phase of this development in respect of noise. The distance between this proposed development and third party residences will ensure noise levels at these locations will not cause any significant impact.

In addition to the above good working practices will be maintained on site at all times, including the selection of plant equipment with a low inherent potential for noise emissions. Proper maintenance of this equipment and the use of exhaust silencers where appropriate will also mitigate against noise generation.
6.8 CONSTRUCTION IMPACTS & MITIGATION

6.8.1 IMPACTS

The negative impact for the construction phase of this development will be low to moderate, but will be short term in nature. During the constructive phase, there is potential for a temporary increase in noise levels from traffic transporting fill material to and from the site, in addition to plant equipment used during the construction phase.

6.8.2 MITIGATION MEASURES

To minimise noise impacts during the construction phase, the following mitigation measures will be implemented on site:

(i) Machinery with low potential for generation of noise will be used.
(ii) Noisy equipment will be located as far away from sensitive properties as permitted by site constraints.
(iii) Hours of construction will be limited so that noisy activities will be minimised during unsocialable hours.

6.9 MONITORING

No monitoring is proposed for this agricultural facility. However, if a complaint is received in relation to noise, an investigation will be commenced in line with EPA guidance note on noise monitoring.

7. LANDSCAPE AND VISUAL

7.1 INTRODUCTION

The Landscape Chapter of the EIS was prepared by NRGE LTD and provides an assessment of the likely landscape and visual impacts of this proposal by Mr. Thomas Mc Enery to expand the existing capacity of the poultry growing operation. This assessment involved a detailed review of all plans, sections and elevations of the existing, proposed scheme, various publications and reports, including the current EIS, together with visits to the proposed and its environs.

7.2 METHODOLOGY

This assessment is made with regard to the vulnerability of the landscape to change and to the location of visual receptors relative to the proposed development. The methodology used in the assessment is based on the EPA Guidelines on the information to be contained in Environmental Impact Statements 2002 and Advice Notes on Current Practice in the preparation of Environmental Impact Statements 2003.

7.2.1 Baseline Assessment

The buildings and structures at Mr. Thomas Mc Enery’s poultry farm were constructed in line with planning permissions received from Limerick County Council. The entire farm yard is at least 400m distant from the public road, and the nearest third party residence. Therefore the likely landscape and visual impacts of the proposed development and assessed against a baseline which acknowledges that the proposed poultry house will continue to elevate in line with the conditions of planning permission as granted by Limerick County Council.
7.2.2 Landscape

With regard to Landscape there are two separate but closely related aspects. The first aspect is visual impact that is the extent to which a new structure in the landscape can be seen. Visual impacts may be categorised under “Visual intrusion” and “Visual Obstruction”, where:

- **Visual intrusion** is impact on a view without blocking, and
- **Visual obstruction** is impact on a view involving blocking thereof.

In assessing visual impact, various aspects and stages are considered in detail including, impact during phasing, impact on completion and longer term established impact.

The second aspect is impact on landscape character, i.e. responses that are felt towards the landscape and drawn on the appearance of the land, including aspect, land-use topography, vegetative cover etc. and their interaction to create specific patterns and landscape units distinctive to particular localities. The character of the existing landscape setting is considered taking account of the various natural and man-made features, such as topography, landform, vegetation, land-use, built environment together with the visibility of and the views to and from the landscape.

7.2.3 Significance Assessment Criteria

The significance criteria used in the assessment are based on the impact levels suggested in the EPA Guidelines on the information to be contained in Environmental Impact Statements (2002) which are set out in this volume of the EIS.

7.3 EXISTING ENVIRONMENT

7.3.1 Ballintubber Landscape Context

The existing Thomas Mc Enery poultry production operation at Ballintubber East, Newcastle West, is in an area which is relatively flat with existing poultry units extremely well screened by hedgerows. The buildings and structures currently in-situ are barely visible from the public road (400m distance), through 2 existing hedgerows, which are well established.

7.3.2 Landscape Setting

The existing poultry farm operated by Mr. Thomas McEnery is not visually prominent from the public roadway. In effect, a number of other agriculture and commercial operations exist in the area, including a number of other poultry and beef farming operations. The Thomas McEnery’s poultry operation is one of the least prominent of these facilities and as a consequence it is not a significant influence on the landscape character of the surrounding area.

*General Low-lying Agricultural Landscape*

Rural, agricultural land with little topographic relief leads from the front to the rear of the site. Much of the landscape surrounding the site is flat where levels are commonly below 50m. Throughout the area the land is farmed with fields enclosed with a varied mix of hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*) hedges, stone walls and fences. Pasture and grassland for silage predominates as a land use and there is little arable farming in the area. Residential property is generally dispersed along local roads.
Developed/Built-up Areas

Development is prominent at the town of Newcastle West and with its associated commercial area. Such development is considered part of the normal rural landscape setting. In addition, individual houses and clusters of residential development are dispersed along local roads.

7.3.3 Landscape Planning

The Inventory of Outstanding Landscapes in Ireland, prepared by An Foras Forbatha in 1997, is the only assessment of landscape quality undertaken at a national level. At a county level, Limerick County Development Plan is the statutory development control and forward planning document pertaining to the project area. Relevant landscape and visual references pertaining to the site and its surrounds are referenced in the following description of the landscape planning environment.

7.3.3.1 Inventory of Outstanding Landscapes in Ireland

The Inventory lists no listing within a 2km from Thomas Mc Enery’s poultry operation, and the proposed site does not fall within a listed area of Outstanding Landscape.

7.3.3.2 Limerick County Development Plan 2006 – 2011

The Limerick County Development Plan 2005 – 2011 as amended, contains the following relevant landscape and visual references.

Chapter 7 environment and Heritage at Section 7.2 Landscape and Visual Amenity amongst other aspects considers issues relating to Trees, Tree Preservation Orders and Hedgerows and Landscape and Visual Amenity.

Under Sub-section 7.2.1 on Trees, Tree Preservation Orders and Hedgerows, the Plan sets out policies relating to enhancing tree cover within the county as follows:-

<table>
<thead>
<tr>
<th>Policy ENV Enhancing Cover</th>
<th>It is the policy of the Council to preserve and enhance the general level of tree cover within the county, both in the countryside at large and also in the county’s town. The Council strongly encourages the establishment of native species, in particular broadleaf species.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy ENV 6 Landscaping &amp; Development</td>
<td>It is the Policy of the Council to ensure the adequate integration of development into the landscape by the retention of trees and landscape features and/or encouraging suitable planting</td>
</tr>
</tbody>
</table>

Sub-section 7.2.2 on Landscape and Visual Amenity, sets out policies relating to Landscape Character, Views and Prospects, Landscape and Amenity views. Under its Landscape Classification, Limerick County Council has identified ten Landscape Character Zones within the county.

7.3.4 “Do-Nothing” Scenario

Should the proposed development not proceed the existing poultry operation will remain and continue to operate under the conditions of the existing planning permission.

NRGE Ltd. 29
7.3.5 “Do-Something” Scenario

Should the proposed development proceed, the existing poultry operation will be expanded to 79,500 bird’s capacity and remain and continue to be developed under the conditions of the new planning permission.

7.4 CHARACTERISTICS OF THE PROPOSAL

7.4.1 Introduction

The construction of the additional poultry house with a capacity of 35,000 birds proposes to carry out a series of modifications to the site as set out in detail in Section 2 Site layout and Construction in this volume of the EIS. In effect the principal landscape and visual aspect of the proposed development entails an expansion of the poultry growing operation.

The following assessment focuses on the proposed extension to the poultry operations

7.5 IMPACTS

7.5.1 Impact Assessment

This involved examining the location of domestic dwellings and the location of the existing and proposed poultry houses. In assessing the impact various phases are considered, including construction, operation and restored

7.5.2 Construction Phase of the new Poultry House

The construction phase will have a relatively low landscape and visual impact. Aspects which pertain to the construction phase proper include: (i) General site works; (ii) Vegetation removal (iii) Excavation of stockpile of topsoil and subsoil, and (iv) The construction of poultry house.

By its very nature, this phase will take place at a relatively low level and against the backdrop of the existing poultry houses, and screened by the existing extensive hedgerow. The final phase of the construction phase will be the erection of the poultry house.

7.5.3 Operational Phase

The nature and process by which the poultry houses will develop is an established and on-going feature of the existing environment. Furthermore, given the relatively low lying nature of the landscape, it is considered that, the proposed development will not have major significant ‘landscape’ impact.

The completed additional poultry house will represent a minor feature in an otherwise low lying setting on the area. The additional poultry house will be over 350m distant from the nearest third party residential dwelling, and screened by the existing established hedgerows. Though the feature will remain as a permanent reminder of the activity, the additional impact of the proposed additional poultry house in the longer term is considered to be of minor impact due to the hedgerows, topography and colouring of the sheds.
7.5.4 Landscape Planning Impact

It is considered that the proposed development will have no significant landscape planning impacts. The development does not impinge on listed scenic views or prospects or on sensitive, vulnerable or designated landscapes.

7.5.5 Landscape and Visual Impact Summary

Given the nature and impact of the existing facility, it is considered that the proposed extension will not result in major significant overall negative landscape and visual impact. As a result, it is considered that the proposal may be viewed as having an acceptable level of landscape and visual impact, though undoubtedly the proposal to expand the capacity of the poultry operation.

7.6 MITIGATION MEASURES

7.6.1 Landscape Treatments involving the Existing Poultry Operation and its Surrounds

Over the years, Thomas Mc Enery has managed and improved the hedgerows around the poultry operation. While the planting is mature and only has visual presence at proximity, it adds to the diversity of habitat and landscape structure in the immediate surrounds and with continued development will assist in ‘visually anchoring’ the poultry houses in its wider setting.

In sitting and designing a proposal to extend the poultry operation at Newcastle West, it is considered more appropriate in landscape and visual terms to incorporate the existing poultry growing operation feature and its setting rather than consider a new site location.

The existing poultry houses has developed gradually over 20 years and is now as much a feature of the local landscape. The topography of the area and the hedgerows around the site results in the existing poultry houses are well screened from domestic dwellings in the area around the operation.

7.7 RESIDUAL IMPACTS

Following the construction of the proposed development, there will be no significant impact in an overall landscape context. The continued management of the hedgerows and the maintenance of the poultry houses will not have significant impact in terms of landscape and visual impact.
SECTION B - THE NATURAL ENVIRONMENT

This Section of the Environmental Impact Statement deals with the potential effects of the proposed scheme on the natural environment. The effects have been grouped as follows:-

Impacts on the Terrestrial Environment including flora and fauna
Impacts on the Aquatic Environment
Impacts on Soil, Geology and Hydrogeology
Impacts on Climate

The various aspects of the natural environment interact to some degree with each other so that assessing one aspect in isolation can be misleading. For example, the survival of terrestrial fauna can be dependent on floral composition, which is in turn dependant on soil composition and groundwater levels. Similarly, the diversity of aquatic flora and fauna will be impacted by both hydrology and the quality of waters receiving drainage from the proposed scheme.

Human Beings also interact with the natural environment, often by altering land-use and landscape patterns for the purpose of agriculture and settlement.

8. TERRESTRIAL ENVIRONMENT

8.1 INTRODUCTION

This chapter outlines the flora and fauna currently present in the area of the proposed extension to the existing poultry growing operation and assesses the impact of the proposals on the terrestrial habitats and species identified. Mitigation measures have been proposed where feasible. The ecological assessment involved walking over the site to identify habitats and species of flora and fauna present in order to determining the ecological diversity of this area. A full Appropriate Assessment Screening Report has been prepared and same is included in Full in Attachment 10.

8.2 METHODOLOGY

8.2.1 Flora

The habitats present were recorded and a list of Floravascular plants, lichen and mosses was compiled. Other details noted during the assessment included recording the presence of habitats, species, general abundance, condition of the vegetation, and the degree of disturbance.

Habitats have been classified in accordance to the standard recommended by The Heritage Council (Fossitt 2000). Plant nomenclature in this report follows Rose (2006) for vascular plants, Philips (1980) for grasses, ferns, mosses and lichens. Attention is given to the possible presence of habitats, plant species that are legally protected under Irish and or European legislation. National Parks and Wildlife Service references to the site including maps of sites of conservation importance in the region and site synopsis were checked.

8.2.2 Birds

During the ecological assessment birds observations were recorded. All species encountered (seen or heard) were recorded and where possible their abundance noted. Areas of Hedgerow within the survey area were surveyed.
8.2.3 Mammals, Amphibians and Reptiles

The presence of mammals, amphibians and reptiles was surveyed by searching for direct observations and for signs of their presence such as feeding signs or dropping and dwellings.

8.2.4 Survey Limitations

The weather conditions were warm, wet and windy during the survey. It is not considered that limitations were associated with the survey of habitats and vegetation.

Every effort has been made to provide an accurate assessment of the situation pertaining to the site. However, an ecological survey can only assess a site at a particular time. This study is a snapshot in time and should not be regarded as a complete study.

8.3 DESCRIPTION OF EXISTING ENVIRONMENT

8.3.1 Designated Sites

The subject site itself is not designated under any Regional, National or European Environmental Designation. It does not therefore require assessment under the Wildlife (Amendment) Act 2000 (S.I No 38 of 2000) or the European Communities (Natural Habitats) Regulations, 1997 (S.I No. 94 of 1997).

However, the following designated areas are located in the Limerick Region:

<table>
<thead>
<tr>
<th>Site Code</th>
<th>Type of Designation</th>
<th>Distance from Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stacks to Mullagharirks</td>
<td>SPA</td>
<td>4Km</td>
</tr>
<tr>
<td>Curraghchase Woods</td>
<td>pNHA</td>
<td>19 Km</td>
</tr>
<tr>
<td>Askeaton Fen Complex</td>
<td>SAC</td>
<td>15 Km</td>
</tr>
<tr>
<td>Ballymorrisheen March</td>
<td>pNHA</td>
<td>15 Km</td>
</tr>
<tr>
<td>Lower River Shannon</td>
<td>SAC</td>
<td>18 Km</td>
</tr>
<tr>
<td>Inner Shannon Estuary –</td>
<td>pNHA</td>
<td>17 Km</td>
</tr>
<tr>
<td>South Shore (000435)</td>
<td>SAC</td>
<td>15 Km</td>
</tr>
</tbody>
</table>

SAC = Special Area of Conservation
SPA = Special Protection Area
NHA = Nature Heritage Area

8.3.2 Flora

The site comprises of improved grassland for silage making with some areas containing Juncus sp. The fields comprise improved grassland with White Clover (Trifolium repens), Creeping Buttercup (Ranunculus repens), Dock species (Rumex sp), ribwort plantain (Plantago lanceolata) and Meadow Buttercup (Ranunculus acris). The field boundaries around the site comprise of Ash (Fraxinus excelsior), Sycamore (Acer pseudoplatanus), and Hawthorn (Crataegus monogyna) with an understory of Bracken, Ivy (Hedera helix) and Hard Fern (Blechnum spicant)

8.3.3 Birds

The Jackdaw (Corvus monedula) and a number of Swallows (Hirundo rustica) and Meadow Pipit (Anthus pratensis) were observed in flight over agricultural lands at the proposed poultry houses.

NRGE Ltd. 33
A pair of stonechat (*Saxicola torquata*) were observed calling in alarm from a post and are nesting in an area of internal field hedgerow.

A number of Chaffinch (*Fringilla coelebs*) and Wren (*Troglodytes*) were present in the hedgerow leading to the site.

### 8.4 IMPACTS

#### 8.4.1 “Do-Nothing”

Should the expansion not be built, there would be no impact on the site adjacent to the existing poultry growing operation.

#### 8.4.2 “Do-Something”

##### 8.4.2.1 Flora

There will be a loss of plant and animal species from the proposed footprint, particularly with regard to improved grassland. The impact on site boundaries including hedgerows and trees will be negligible. It is clear that no section of hedgerow will be removed as part of the construction. The Site is of low ecological value with poor species diversity, improved grassland which is mowed for silage twice per year.

##### 8.4.2.2 Designated Sites

There will be no impact on designated sites as the nearest designated site is more than 4 kilometres away.

##### 8.4.2.3 Birds

There are no breeding birds of high conservation concern likely to be impacted by the proposed expansion.

##### 8.4.2.4 Mammals

The proposed development will result in a loss of improved agricultural land and this is considered to be an insignificant impact.

### 8.5 MITIGATION MEASURES

The nature of the proposed development is such that the loss of improved agriculture with low ecological value is of insignificant impact and no mitigation is required.

### 8.6 CONSTRUCTION IMPACTS AND MITIGATION

#### 8.6.1 Impacts

Construction consists of a number of activities which have the potential to affect flora and fauna e.g. site clearance, excavation and infill.

Site clearance has the largest impact on ecology, involving the removal of pre-existing habitats and considerable soil disturbance. It will have least impact on fauna if carried out in the August-November period, avoiding the main bird and mammal breeding time. Excavation and infill require the use of heavy machinery which has to be stored and maintained on site, but also has to gain access to the working area. This may cause damage to a wider zone of vegetation, particularly in wet weather when compaction and physical damage is likely.
8.6.2 Mitigation

As a minimum, the contractor will comply with all legislative provisions relating to hedgerow/tree removal and the protection of birds and bats and shall have regard to reducing impacts on nesting birds and breeding/roosting bats. If badger setts are located, pre or during construction, they will be dealt with in accordance with advice from the local NPWS wildlife ranger.

8.7 RESIDUAL IMPACTS

There will be a permanent loss of habitat from beneath the footprint of the proposed expansion.

9. AQUATIC ENVIRONMENT

9.1 INTRODUCTION

The abundant supplies of surface and groundwater within Ireland dictate the importance of measures to protect the aquatic environment. The intense nature of agriculture combined with the topography in County Limerick as in the past presented problems whereby the aquatic environment has suffered the adverse effects of inadequate mitigation measures in the protection of local watercourses against water pollution against agriculture pollution.

However, in recent years the combination of factors such as legislation, the REPS programme, catchment management initiatives and increased local authority inspections has led to improvement in the quality of many surface waters through improved agricultural practices in terms of land spreading and waste storage.

This self-regulating approach to water management was incorporated into the planning of the proposed development, and the developer already operates the existing poultry units on site to this principle.

9.2 DESCRIPTION OF EXISTING ENVIRONMENT

The site has no river or water bodies but contains a small drainage ditch which drains the site and surrounding agricultural land.

Surface water exits the site through SW1. A sample will be taken quarterly and tested for COD at an independent laboratory. The records will be retained on site and included in the Annual Environmental Report.

9.3 IMPACTS

9.3.1 “Do-Nothing”

Should the extension not be built, there would be no loss or changes in the drainage from the site.
9.3.2 “Do-Something”

9.3.2.1 General

The current proposals at Thomas Mc Enery’s poultry growing operation will increase the flow in the drainage ditch following rainfall as previously the rainfall would have percolated or evaporated. Such potential impacts include loss or alteration of habitats and species, increased suspended solids, alteration of the hydrology and sediment deposition typical of the area.

9.4 MITIGATION MEASURES

9.4.1 Pollutants and Waste

To prevent chemical pollution during the operation of the poultry operation, all fuels or chemicals kept on site will be stored in bunded containers. All major refuelling and maintenance events will be undertaken away from the site. Equipment will be regularly maintained and leaks repaired immediately away from the site if possible. Accidental spillages will be contained and cleaned up immediately. Remediation measures will be carried out in the unlikely event of pollution of adjacent watercourses in accordance with the consultant’s recommendations.

9.5 CONSTRUCTION IMPACTS AND MITIGATION

9.5.1 Impacts

9.5.1.1 Loss or alteration of habitats and species

There will be a loss of improved grassland habitats and species as a consequence of the expansion of the site.

9.5.1.2 Increased suspended solids

The construction works associated with expansion of the poultry growing operation has the potential to cause the release of sediments into watercourses notably drainage ditches on site. It is predicted that this will be a short-term impact as the construction phase is short.

9.5.1.3 Pollutants and waste

The likely sources of chemical contamination would be from site machinery and vehicles. Pollution could occur in a number of ways, such as neglected spillages, the storage handling and transfer of oil and chemicals and refuelling of vehicles. Accidental leakage or discharge of chemicals and pollutants could cause changes in the PH of the water and could have a direct toxic impact on the fauna and flora at the location of the development and further downstream. If waters become polluted, species more tolerant to pollution can extend their distribution, thus altering the species composition of the watercourse.

9.5.2 Mitigation

9.5.2.1 Loss or alteration of habitat and species

To minimise the loss of the habitat and species, the area of construction should be kept to the minimum required. Construction should be approached from the existing poultry operation to
avoid disturbing neighbouring habitats. However, since it is already a low ecological habitat, the impacts from the loss are not significant.

9.5.2.2 Increased suspended solids

To minimise the amount of suspended solids released into the water column during construction, efforts should be made to minimise the area disturbed. Needless clearing and grading should be minimised and phased to limit exposure.

9.5.2.3 Pollutants and Waste

To prevent chemical pollution during the construction of the poultry house, the EPA guidance on storage of materials will be followed at all times.

9.6 RESIDUAL IMPACTS

Assuming all mitigation measures are put in place and the loss of habitat is of low ecological value, there should be no residual impacts.

9.7 MONITORING

Quarterly monitoring of the storm water outflow through SW1 to the drainage ditch will be carried out. Under the required conditions of the IPPC License, these samples will be tested for COD at an independent laboratory; the records of which will be retained on-site and included in the Annual Environmental Report.

10. SOILS, GEOLOGY AND HYDROGEOLOGY

10.1 INTRODUCTION

NRGE LTD was commissioned by Thomas Mc Enery to undertake an Environmental Impact Assessment of the proposed expansion to the poultry growing operation on the soils, geology and hydrogeology of the area. This report should be read in conjunction with the site layout plans for the proposed development and the project description sections of the EIS. In the assessment, particular attention is focused on the likely presence of contaminated soils and groundwater and on sensitive receptors, such as groundwater dependent ecosystems, vulnerable aquifers or water supplies close to the site. The estuarine habitats surrounding the site are potential receptors of groundwater discharges from the site.

10.2 METHODOLOGY

This report is based on a desk study and a summary of the available and relevant data on the area:


GSI, 1999 “Geology of the Shannon Estuary. A Geological Description of the Shannon Estuary Region including parts of Clare, Limerick and Kerry, to accompany the Bedrock Geology 1:100,000 Scale Map Series, Sheet 17, Shannon Estuary.

This environmental impact assessment was prepared in accordance with Guidelines on the information to be contained in Environmental Impact Statements (EPA 2002) and Geology in Environmental Impact Statements, a Guide by the Institute of Geologist in Ireland (IGI, 2002).

10.3 DESCRIPTION OF EXISTING ENVIRONMENT

The natural topography of the site ranges from 45 – 46 meters. The topography of the land is relatively flat with a slight drop on site towards the proposed poultry house.

10.3.1 Soils and Subsoils

The soils in the area occur on flat and undulating relief at elevations varying from 10 to 130 meters. They are mainly associated on the landscape with the Elton Series and to a lesser degree with the Patrickswell and Rathcannon Series. These poorly drained soils of clay loam to clay texture and of high to very high base status have been classified as podzolic Gleys. The profile is characterised by a dark-brown surface horizon overlying horizons that are gleyed and that display drab greyish colours and abundant mottling: the mottles increase in size and contrast with depth where they tend to mask the greyish background colours. These horizons overlie a thick strongly gleyed textural B horizon which merges with the parent material at approximately 60 inches deep.

Structure is only moderately well developed and weak in the upper horizons and becomes massive with depth; only the upper horizons are friable. Likewise root development is satisfactory in the surface horizons but poor further down. The poor drainage is caused mainly by slow run-off due to the relief, aggravated by the poor permeability of the soils themselves.

The Howardstown soils are devoted mostly to pasture. Grass growth is generally poor. Two well-defined grassland types occur. One has an abundance of the species of the well-drained grasslands growing side by side with moisture-loving rush species such as Juncus effusus (soft rush), Juncus articuiatus (jointed rush) and Juncus inflexus (glaucous rush).

10.3.2 Bedrock Geology

The site is underplayed with Dinantian Pure Unbedded Limestones. The rocks form part of a system of two tight major folds, whose axes are orientated ENE-WSW. Overall, the strata dip North, West and South, roughly at right angles to the edges of the GWB. Measured dip angles are between 10 and 40° meters and reflect the steep mounds of the Waulsortian limestones as well as the folding. N-S, E-W and NE-SW trending faults displace the rock units; they are mapped at the edges of the body, and although no faults or minor folds are mapped in the centre of this are, they will be present.

Transmissivity in the diffusely karstified aquifers is in the range 20-2000 m. In this area of the country, the median value will probably be towards the lower-middle end of the range. At Croom and Fedamore SWs (in the adjacent Fedamore GWB), transmissivities are 120m.

Thickness: The Dinantian Pure Unbedded Limestones attain maximum thicknesses of more than 1200m. However, the effective flowing thickness is likely to be about 30m, although
much deeper inflows can occur if associated with faults or dolomitisation. An epikarstic layer of at least a couple of metres thick is likely to exist at the top of the bedrock. In the vicinity of Newcastle West, borehole logs indicate three main production zones; a high permeability karstified bank in the upper 10-15m of bedrock; a middle zone from 35-50m where North/South trending fractures, spaced at between 500m and 800m apart.

10.3.3  Hydrogeology

10.3.3.1 Aquifer Classification

The Dinantian Pure unbedded Limestones are reported (GSI, 1998) to be extensively karstified and dolomitised. In the Newcastle West area karstification is reported to occur to depths up of 800 metres. Dolomitisation is a process by which circulating groundwater replaces calcium with magnesium and results in an increased porosity and permeability of the host rock. The Dinantian Pure unbedded Limestones Formation in this area is classified by the GSI as Rkd (Regionally Important Aquifer- karstified aquifer.  See Attachment 11.

10.3.3.2 Groundwater Levels

Water levels in the Dinantian Pure Unbedded Limestones are generally shallow at less than 15 metres. Groundwater fluctuations between summer and winter are typical.

10.3.3.3 Groundwater Quality

The hydrochemistry of groundwater beneath the site is dominated by the presence of limestone in both the bedrock and subsoils and is hard, calcium bicarbonate type water. The principle contaminants of concern arising from the production process are high pH, alkalinity and aluminium which are soluble at high pH.

10.3.3.4 Groundwater Usage

The site usage is not recorded as the site water supply is supplied by an on-site well.

10.4  IMPACTS

10.4.1.1 Soils

The soils round the development have no intrinsic value.

10.4.1.2 Geology

There is no significant impact on the geology of the area during the operational phase as a result of the proposed development.

10.4.1.3 Hydrogeology

Following construction a significant proportion of subsoils will have been removed. This will potentially increase the aquifer vulnerability resulting in groundwater being more vulnerable to pollution. The GSI Groundwater Classification for this site is L (Low).  See Attachment 12.

There is potential to pollute groundwater as a result of leakage to leachate through the base of the underground storage tanks.

NRGE Ltd. 39
10.5 MITIGATION MEASURES

10.5.1.1 Hydrogeology

The proposed extension of the poultry growing operation will result in a new poultry house. This construction will form a barrier within which potential contaminants will be contained within the poultry house:

10.6 CONSTRUCTION IMPACTS AND MITIGATION

10.6.1 Impacts

10.6.1.1 Soils

The proposed development will require the stripping of top-soils resulting in a loss of soils over the footprint of the poultry houses. This is an essential part of the development and is an impact that cannot be mitigated.

10.6.1.2 Geology

It will be necessary to import rock-fill as foundation material for the proposed development.

10.6.1.3 Hydrogeology

The removal of sub-soils will potentially result in an increase aquifer vulnerability making groundwater more vulnerable to pollution.

10.6.2 Mitigation

10.6.2.1 Soils

Topsoil stripped will be temporarily stockpiled before being constructed into an earthen berm around the new structure.

10.6.2.2 Geology

Rock fill material will be sourced from the local quarry which lies approximately 10km to the North.

10.6.2.3 Hydrogeology

Mitigation measures to prevent groundwater pollution during construction will be put in place

10.7 Monitoring

10.7.1 Construction Phase

Measures will be taken in order to prevent contamination of groundwater.

10.7.2 Operational Phase

The following monitoring will be undertaken during the lifetime of the facility: pH, Conductivity and other water quality measurements in the site well on an annual basis.
11. CLIMATE

11.1 INTRODUCTION

Climate can refer to both the long-term weather patterns in an area and also to the more localised atmospheric conditions, referred to as the microclimate. Climate has implications for many aspects of the environment from soils to biodiversity and land-use practices. In a global sense much of the concern with facilities such as Thomas Mc Enerys poultry growing operations is the emissions from the operation and the potential for increases in air pollutants, which may contribute to climate change. This impact assessment only deals with the proposed expansion to the poultry operation.

This section deals with the exiting climate in the area and how the proposed scheme may impact on the microclimate.

11.2 METHODOLOGY

The climate of the Co Limerick Region is characterised by the frequent passage of Atlantic low pressure weather systems and associated frontal rain belts from the West during much of the winter period. Over the summer months, the influence of anticyclonic weather conditions will result in drier continental air, in particular when winds are from an easterly direction, interspersed by the continuing passage of Atlantic frontal systems. Occasionally, the establishment of a high pressure area over SW Ireland will result in calm, dry conditions and in the winter these periods are characterised by the formation of low-level temperature inversions at night-time. Fog can occur in low-lying areas in the region under these conditions of slack winds and clear skies. Prolonged dry weather conditions are relatively infrequent but should easterly continental airflows extend over the West of Ireland, drought conditions may result in the region which may last for up to 2 to 3 weeks.

The nearest Met Eireann meteorological station is at Shannon Airport and long-term measurements of wind speed/direction and aid temperature for this location would be representative of prevailing conditions experienced in the vicinity of Thomas Mc Enerys poultry growing operation.

11.3 DESCRIPTION OF EXISTING ENVIRONMENT

Meteorological data from the Met Eireann station in Shannon Airport during the baseline survey has been compiled. The 2004 average monthly data has been compared to the 30-year averages for each month from Shannon Airport to determine the degree of representation of the actual meteorological conditions versus what is experienced on average at the site. This comparison is presented in Table 11.1

A comparison of temperatures indicates that for each month of 2010, temperatures were on average lower that the corresponding 30 year averages by a factor of 0.7°C. For total rainfall values, the January 2004 total rainfall was below the 30-year average.
Table 11.1 2010 and 30-year average meteorological conditions from Shannon Airport

<table>
<thead>
<tr>
<th>Year</th>
<th>Total rainfall (mm)</th>
<th>Monthly Mean (mm)</th>
<th>Average Temperature (°C)</th>
<th>Average Wind speed (knots)</th>
<th>Wind (knots)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td>2010 mean</td>
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</table>

11.4 IMPACTS

11.4.1 “Do Nothing” Impact
If the proposed extension does not go ahead, the capacity of the poultry growing operation remains the same. Should this happen, emissions from the poultry houses including all aspects of the operation would remain the same.

“Do something” Impacts
If the proposed extension does go ahead there are no direct impacts predicted on macroclimate as a result of the proposed extension. The extension will increase the capacity of the operation and the site will require an IPPC Licence.

Air quality emissions produced in heating the proposed and existing poultry houses will be governed by the IPPC Licence in the future. In setting limits for industry in a future integrated Pollution Prevention and Control (IPPC) licence the EPA will take account of national and EU legislative limits and guidelines for aid pollutants and also Government policy in relation to Climate Change.
SECTION C - MATERIAL ASSETS

This section of the Environment Impact Statement deals with material assets that will potentially be affected by the proposed poultry growing operation expansion. These assets are grouped into:-

Material Assets: **Agricultural Properties** including all agricultural enterprises.

Material Assets: **Non-Agricultural Properties** including residential, commercial, recreational and non- Agricultural land

Material Assets: **Natural or other resources** including mineral resources, land and energy.

Material Assets are generally considered to be the physical resources in the environment which may be either of human or natural origin. The object of the assessment of these resources is to identify the impact of the development on individual enterprises or properties and to ensure that natural resources are used in a sustainable manner in order to ensure availability for future generations.

Agricultural enterprises interact, to a large extent, with the natural environment in terms of climate, aid quality, soil, hydrology and hydrogeology. Some domestic animals, such as horses and milking cows, may be impacted by traffic-generated noise. In addition to agricultural enterprises, residential commercial and private properties will be affected by land loss as a result of the new poultry house.

Resources required for the proposed development includes existing land, fill material which will have to be sourced from quarries and electricity required for the purpose of powering the water, feeding, lighting and heating systems water.

12. MATERIAL ASSETS - AGRICULTURE

12.1 INTRODUCTION

NRGE LTD carried out an assessment of the potential agricultural impact from the proposed expansion of this poultry farm. The location for the proposed extension is currently a Greenfield site and is completely within the boundary of Mr Thomas Mc Enerys own lands. The proposed extension will occupy an area of approximately 0.20 hectares adjacent to the existing farm yard complex which is bounded by hedgerows.

No additional holdings will be directly impacted through loss of land by the proposed scheme as all lands proposed for the extension are within the ownership of Mr Thomas Mc Enery.

12.2 METHODOLOGY

A Desktop survey and a field survey were carried out to assess the potential impact on agriculture in the area. The first was a walkover of the site, which was conducted in March 2012. This walkover assessed a number of factors including: (i) The current agricultural practice taking place on the lands; (ii) The quality and drainage of the soils, and (iii) Level of management currently practiced.

The second method was a desk top survey that included statistical information from the CSO (Central Statistic Office) and mapping data both from the 50,000 Discovery Series, 2,500 Ordnance Survey mapping and Corrine land use mapping.
12.3 DESCRIPTION OF EXISTING ENVIRONMENT

12.3.1 Limerick

There are approximately 269,133 hectares of agricultural land in Limerick of which 228,074 hectares or 84% is pasture. According to the Census of Agriculture (2000) the average farm size for Limerick is approximately 23.6 hectares, approximately 1.2 hectares bigger than the national average. There are 6,194 farms in Limerick and 37% of them are involved in specialist dairying and 52% of them involved in specialist beef farming.

12.3.2 Ballintuber East

The site for the proposed development is South West of Newcastle West. The lands are relatively flat and all are under grass. The site is predominated by improved agricultural grassland. The soils are poorly draining in the area. The lands relating to the proposed extension are owned by the developer and are currently used as grassland. The lands are generally well managed with good grass swards in evidence.

12.4 IMPACTS

12.4.1 “Do-nothing”

Should the proposed extension not be built, the current practice of using the proposed site for grass production will continue.

12.4.2 “Do-something”

If the proposed construction is granted planning permission, the only issue that may be potentially impacted on agriculture in the area is land loss.

Land loss: Should the proposed development receive planning permission there will be loss of lands to facilitate the extension. The lands proposed for the extension are wholly within the ownership of Thomas Mc Enery. However, Thomas Mc Enery currently uses the site for grass production.

12.5 MITIGATION MEASURES

No mitigation required as the land is of low ecological value.

12.6 CONSTRUCTION IMPACTS AND MITIGATION

12.6.1 Construction Impacts

There are a number of specific issues that may impact on agriculture during the construction phase of the proposed development. These include:

Noise: Increased noise from construction machinery has the potential to be an issue with certain sensitive livestock such as dairy cows and horses.

Traffic: There will be an increase in traffic during the construction phase of the proposed development.

Dust: The proliferation of dust during construction has a nuisance value and livestock are at risk to eye irritation from high levels of wind blowing dust particles.
12.6.2 Mitigation

Traffic: Discussions will take place with local landowners to ensure that construction traffic causes minimum interference with movements of stock and does not hinder farm operations such as silage/hay making.

Dust: Mitigation measures for construction dust are outlined above. These measures will be followed.

Noise: No mitigation is required; if a complaint is received an investigation will be commenced.

12.7 RESIDUAL IMPACTS

No residual impacts on Agriculture are predicted.

13. MATERIAL ASSETS – NATURAL AND OTHER RESOURCES

13.1 INTRODUCTION

This section of the EIS considers the existence of and the impact on natural and other resources in the vicinity of the proposed expansion to the poultry operation. It also considers any impact on natural resources due to the proposed increased capacity.

13.2 DESCRIPTION OF EXISTING RESOURCES

13.2.1 Land use and Soil

The proposed additional poultry house extension will occupy an area of approximately 0.20 hectares, which is currently a Greenfield site. The soil types occurring within the footprint of the proposed extension are mostly made up of glacial till. A detailed description of the existing soil environment is provided in Chapter 10 soils, Geology and Hydrogeology.

It is estimated that approximately 4300M3 of topsoil will be removed from the footprint of the proposed poultry house. This material will be stockpiled appropriately for later use in the development of an earthen berm around the proposed development.

13.2.2 Transport Network

The transportation of all the bulk of raw materials transported to the poultry growing operation is brought in by road. The site is close to the Regional route R522 and the local road access to the site is in good repair.

13.2.3 Utilities

The area in the immediate vicinity of the poultry operation is rural in nature, with much of the land in agricultural use. However, a network of utilities associated with residential houses, agricultural and commercial operations are all available in the general hinterland.

13.2.4 ESB

The site has good electrical network with 38Kv and 10Kv lines in the area.
13.3 IMPACT AND MITIGATION

Overall the proposed expansion of the poultry operation will have a minor negative impact on natural and other resources. Any disruption to services and existing transport networks will be of a temporary nature during the construction phase of the development.

13.3.1 Land and Soil

In total the proposed expansion to the poultry farm will occupy approximately 0.20 hectares of land for the main footprint, which is completely within Thomas Mc Enery’s owned lands. As such, it is considered that there will be no significant impact on land or soils. Impacts on the agricultural use of land are discussed in Chapter 12 Material Assets – Agriculture.

13.3.2 Transport Network

The increase in the use of raw materials associated with the increase in poultry growing operation will not lead to a significant increase in traffic movements. Therefore, there will be no impact on the existing road network.

13.3.3 Economic Minerals

It is considered that the proposed expansion of the poultry growing operation will have no significant impact on mineral resources in the vicinity of the area.

13.3.4 Raw Materials Required

13.3.4.1 Construction of the poultry House

Construction material when needed will be brought in from nearby sources such as local quarries.

13.3.4.2 Raw material inputs for increased poultry production capacity.

There will be a minor increase on natural resources from the increase in use of raw materials. The usage of raw water in the operation will also increase.

13.4 RESIDUAL IMPACTS

No residual impacts are predicted.
SECTION D – ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL HERITAGE

This section of the Environmental Impact Statement examines impacts of the development under the headings:

- Architecture
- Archaeology
- Cultural Heritage

Archaeology sites, buildings of historic, artistic or architectural interest and sites of cultural heritage form part of the landscape of Counties Clare and Limerick. As part of the constraint and route selection phases of this development, every effort has been made to avoid known Architectural, Archaeological and Cultural Heritage sites. This section of the Environmental Impact Statement examines the impacts of the development on known sites which (could not be avoided) or potential sites which have come to light during the field survey of the proposed route.

ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL HERITAGE LEGISLATION AFFECTING THIS PROJECT

NATIONAL MONUMENTS LEGISLATION (PRINCIPAL ACT 1930 (AS AMENDED))

All archaeological sites have the full protection of the national monuments legislation (Principal Act 1930; Amendments 1954, 1987, 1994 and 2004). In the 1987 Amendment of Section 2 of the Principal Act(1930), the definition of a national monument is specified as:

- Any artificial or partly artificial building, structure or erection or group of such buildings, structures or erections.
- Any artificial cave, stone or natural product, whether forming part of the ground, that has been artificially carved, sculptured or worked upon or which (where it does not form part of the place where it is) appears to have been purposely put or arranged in position.
- Any, or any part of any, prehistoric or ancient
  (i) Tomb, grave or burial deposit, or
  (ii) Ritual, industrial or habitation site and
- Any place comprising the remains or traces of any such building, structure or erection, any cave stone or natural product or any such tomb, grave, burial deposit or ritual, industrial or habitation site…

Under Section 14 of the Principal Act (1930)

It shall be unlawful..

- To demolish or remove wholly or in part or to disfigure, deface, alter or in any manner injure or interfere with any such national monument without or otherwise than in accordance with the consent hereinafter mentioned ( a licence issued by the Office of Public Works National Monuments Branch).
Or

- To excavate, dig, plough or otherwise disturb the ground within, around or in the proximity to any such national monument without or otherwise than in accordance.

Under Amendment to Section 23 of the Principal Act (1930)

A person who finds an archaeological object shall, within four days after the finding, make a report of it to a member of the Garda Siochana or the Director of the National Museum.

The latter is of relevance to any finds made during a watching brief.

In the 1994 Amendment of Section 12 of the Principal Act (1930) all of the sites and ‘places’ recorded by the Sites and Monuments Record of the Office of Public Works are provided with a new status in law. This new status provides a level of protection to the listed sites that is equivalent to that accorded to ‘registered’ sites (Section 8(1), National Monuments Amendment Act 1954) as follows. The Commissioners shall establish and maintain a record of monuments and places where they believe there are monuments and the record shall be comprised of a list of monuments and such places and a map or maps showing each monument and such place in respect of each County in the State.

The Commissioners shall cause to be exhibited in a prescribed manner in each county the list and map or maps of the county drawn up and publish, in prescribed manner information about when and where the lists and maps may be consulted.

In addition, when the owner or occupier (not being the Commissioners) of a monument or place which has been recorded, or any person proposes to carry out, or to cause or permit the carrying out of, any work at or in relation to such monument or place, he shall give notice in writing of his proposal to carry out the work to the Commissioners and shall not, except in the case of urgent necessity and with the consent of the Commissioners, commence the work for a period of two months after having given the notice.

LOCAL GOVERNMENT PLANNING AND DEVELOPMENT ACT

Structures of architectural, cultural, scientific, historical or archaeological interest can also be protected under the Planning and Development Act, 2000, where the conditions relating to the protection of architectural heritage are set out in part IV of the act. This act superseded the Local Government (Planning and Development) Act, 1999, which came into force in January 2000.

The act provides for the inclusion of protected structures into the planning authorities’ development plans and sets out statutory regulations regarding works affecting such structures. Under the new legislation, no distinction is made between buildings formerly classified under development plans as List 1 and List 2. Such buildings are now all regarded as ‘protected structures’ and enjoy equal statutory protection. Under the act the entire structure is protected including a structure’s interior, exterior, attendant grounds and also the structures within the attendant grounds.

The act defines a ‘protected structure’ as follows

(a) A structure, or
(b) A specified part of a structure

Which is included in a record of protected structures and, where that record so indicates, includes any specified feature which is within the attendant grounds of the structure and which would not otherwise be included in this definition.

NRGE Ltd. 48
Protection, in relation to a structure or part of a structure, includes conservation, preservation and improvement compatible with maintaining the character and interest of the structure or part.

Part IV of the act deals with architectural heritage and Section 57 deals specifically with works affecting the character of protected structures or proposed protected structures.

The carrying out of works to a protected structure, or a proposed protected structure shall be exempted development only if those works would not materially affect the character of:

(a) The structure, or

(b) Any element of the structure which contributes to its special architectural, historical, archaeological, artistic, cultural, scientific, social or technical interest.

Section 58; subsection 4 states that any person who, without lawful authority, causes damage to a protected structure or a proposed protected structure shall be guilty of an offence.
14. ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL HERITAGE

14.1 INTRODUCTION

There are no buildings/structures of architectural significance located on or adjacent to the proposed site or likely to be impacted by the proposed development. There is no evidence of any archaeological features at the site. The proposed poultry farm site is not located near, and/or likely to impact on any monuments or sites of archaeological interest as identified in the Sites and Monuments Database of the Archaeological Inventory of Ireland.

An assessment of the impact on architectural, archaeological and cultural heritage was undertaken by NRGE Ltd to assess the impact of any extension to the existing poultry operation at Thomas McEnery poultry growing operation. This chapter outlines issues with respect to the proposed development on the receiving archaeological, architectural heritage and cultural heritage environment and proposes measures to safeguard any monuments, features or finds of antiquity.

The proposed poultry growing house is located on a green field site to the West of the existing poultry house, and is located in the townland of Ballintober.

14.2 METHODOLOGY

A combination of desk and field based studies were undertaken in order to assess the potential impact resulting from the proposed expansion of the poultry operation at Ballintober.

14.2.1 Desk Studies

The following sources of information were consulted as part of the desk based study for this EIS.

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Record of Monuments and Places (RMP)</td>
<td>The Record of Monuments and Places (RMP) of the Department of the Environment, Heritage and Local Government, records known upstanding archaeological monuments, their original location and the position of possible sites.</td>
</tr>
<tr>
<td>The Topographical Files of the National Museum of Ireland (NMI)</td>
<td>The topographical files identify recorded stray finds held in the NMI. The archive was studied for possible finds occurring in townslands associated with the proposed route.</td>
</tr>
<tr>
<td>Documentary and Cartographic Sources</td>
<td>Documentary and literary references, including excavation bulletins and historic maps, were also consulted to predict likely archaeological remains surviving on site and to elucidate the development of the immediate environs of the study area. The maps consulted include, the Down Survey Map of 1656, the</td>
</tr>
</tbody>
</table>
14.2.2 Field Inspection

A field inspection of the Site at Ballintober East was carried out in March 2012 to determine the existing nature of the site. It also sought to identify any low visibility archaeological features that might have little surface expression or areas in the study area that could have some archaeological potential or architectural merit.

14.3 DESCRIPTION OF EXISTING ENVIRONMENT

It should be noted that the information provided above is a very brief synopsis of the architectural heritage of the environs of the site. The assessment of the area is based on extensive desk and field based investigations.

A study was also undertaken of all previous archaeological excavations that occurred within the area around the poultry operation from 1970 to 2006 the only years for which this information is currently available (See Table 14.1). The complete list of protected structures based on the Record of Protected Structures which is included in the Limerick County Development Plan 2010-2016, was reviewed, and this indicated that there are no listed sites in the townland of Ballintober East, or the adjacent townlands of Ballintober West or Ballintober South.

A review of the National Monuments Records shows that there are three referenced sites in the townland of Ballintober East, all of which are located 250m to 350m South of the proposed site. There is one record for Ballintober South, which is located 1km South West of the proposed site, and there are two records in Ballintober West between 400m and 650m.
West and North West of the proposed site (Attachment 13). Their details are summarised in Table 14.1

Table 14.1 Architectural Heritage sites in the vicinity of the proposed Development.

<table>
<thead>
<tr>
<th>SMR NO.</th>
<th>TOWNLAND</th>
<th>SITE TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1044-077</td>
<td>Ballintober East</td>
<td>Enclosure</td>
</tr>
<tr>
<td>L1044-075</td>
<td>Ballintober East</td>
<td>Enclosure</td>
</tr>
<tr>
<td>L1044-076</td>
<td>Ballintober East</td>
<td>Ringfort - rath</td>
</tr>
<tr>
<td>L1044-072</td>
<td>Ballintober South</td>
<td>Redundant Record</td>
</tr>
<tr>
<td>L1044-073</td>
<td>Ballintober West</td>
<td>Ringfort - rath</td>
</tr>
<tr>
<td>L1044-074</td>
<td>Ballintober West</td>
<td>Ringfort - rath</td>
</tr>
</tbody>
</table>

14.3.1 SECTION B- ARCHAEOLOGY

An assessment of Archaeological Features in the vicinity of the proposed development has been carried out. It is considered unlikely that there are any unknown archaeological remains or features in the vicinity of the proposed development, or that the development will impact, either physically or visually, on the archaeological heritage of this area. It should be noted that the information provided below is a very brief synopsis of the archaeology of the environs of the site.

14.3.1.1 DESK SURVEY

The RMP constraints map relevant to the proposed development is sheet 044 of the Ordnance Survey six inch series for County Limerick. The sites are numbered according to the Ordnance Survey six inch sheet on which they are located, so that site 077 on six inch sheet 044 is listed as L1044:077. A county code, LI for Limerick is included.

There are no recorded archaeological sites within the proposed poultry house. However there are a number of sites listed in the Record of Monuments and Places (RMP) of the Department of the Environment heritage & Local Government which occur within 1Km of the proposed development and these are outlined in Table 14.1. Recorded RMP sites are shown on the accompanying site location map.

14.3.1.2 SECTION C – CULTURAL HERITAGE

Farming traditions in the area have been stock rearing, milk production and poultry production. Animal manures were recycled onto the land reducing the cost of production. It should be noted that the information provided above is a very brief synopsis of the cultural heritage of the environs of the site.

Town lands are a unique feature in the Irish landscape. They are one of the oldest land divisions in the country and their origins are undoubtedly of great antiquity, most certainly pre-Norman. The town land boundaries within the study area include...
14.4 IMPACTS

14.4.1 Architectural Heritage Impacts

Neither the Limerick county Development Plan (1999) or the Draft Development Plan 2005-2011 list any protected structures within the proposed poultry houses.

14.4.2 Archaeological Heritage Impacts

There is no recorded archaeological site within the proposed development area. There are no upstanding archaeological remains that will be affected by the proposed development.

The proposed development area is characterised by a single type topography, namely the low lying improved agricultural land. It is considered unlikely that subsurface archaeological features, finds and/or soils may be discovered during the construction phase of the development.

14.4.3 Cultural heritage Impacts

There are no features of cultural heritage interest within the proposed development area and in its surrounding townlands.

14.5 MITIGATION MEASURES

14.5.1 General

The developer’s attention is drawn to the National Monuments Legislation (1937-2004), which states in the event of the discovery of archaeological finds or remains, the Department of the Environment, heritage and Local Government should be notified immediately. The developer will notify if any archaeological finds or remains are found during the project.

14.5.2 Architectural Heritage

No mitigation required

14.5.3 Architectural Heritage

Considering the landscape around the proposed poultry houses is flat and primarily used for grazing and silage production, it is not required to employ an archaeologist.

14.5.4 Cultural Heritage

The locations of the proposed poultry houses are such to minimise the disturbance or removal of hedgerows.

14.6 CONSTRUCTION IMPACTS AND MITIGATION

All construction work will be confined to construction area outlined in the EIS. Any ancillary works additional to those described here, will be identified at pre-construction stage so that appropriate mitigation measures can be put in place at the earliest possible opportunity.
14.7 RESIDUAL IMPACTS

It is not anticipated that any residual impacts will remain if the appropriate mitigation measures and procedures are put in place.