ENVIRONMENTAL IMPACT STATEMENT (EIS)

FOR

ANDREW KEATING POULTRY OPERATION

AT

AGHAREAGH/DRUMARY,

NEWBLISS,

CO. MONAGHAN

September 2016

Prepared by:

Traynor Environmental Ltd
Belturbet Business Park
Creeny
Belturbet
Co. Cavan

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1.0 INTRODUCTION

This Environmental Impact Statement (EIS) was compiled following an Environmental Impact Assessment (E.I.A) of a licensable activity on an existing poultry farm located in a rural agricultural hinterland approximately 3.3km from the village of Newbliss Co. Monaghan. The licensable activity is a poultry facility currently operating to a capacity of c. 50,000 broiler places. The site has Mr Andrew Keating as a fulltime manager (owner) and it is his responsibility to look after the day-to-day running of the site.

1.1 Background to the development

This chapter broadly describes the legislation under which Mr. Andrew Keating's existing poultry operation is presented. The project site is a privately owned poultry farm supplying poultry to Western Brand poultry processing plant in Ballyhaunis Co. Mayo. The current project involves the completion of an Environmental Impact Statement clarifying the nature of all current and proposed impacts that the poultry farm currently has and will have on its surrounding environment.

The Environmental Impact Statement will be submitted to Monaghan County Council. In addition, Mr. Andrew Keating has applied for an Industrial Emissions Activity (IEA) Licence to the EPA.

1.2 Proposed Development / Operational development

Mr Andrew Keating's Poultry Farm consists of two poultry houses. The site is located on the borderline between the townlands of Aghareagh and Drumary in County Monaghan. Therefore the location of the first poultry house is (E256821,N321482) at Aghareagh, Doohat, Co. Monaghan and the location of the second poultry house is (E256829,N321479) which is located approximately only 8m further East on the same site at Drumary Newbliss Co. Monaghan. The site is located approximately 3.3 km South East from the village of Newbliss. This poultry farm is currently operating as a 50,000 place chicken farm in 2 houses. (House 1, 25,000 birds placed (capacity 25,000 birds) and House 2 25,000 birds placed (capacity 25,000 birds) Therefore there is an overall capacity for 50,000 birds which the farm is currently working at. Both poultry houses are 73.2 metres long x 14.6 metres wide.

The poultry house which is located furthest West on the site (address: Aghareagh, Doohat Co. Monaghan) was granted planning permission on 28th November 1986 for the erection of a poultry house which since has been fully constructed.

The second poultry house located furthest East on the same site (address: Drumary, Newbliss, Co. Monaghan) was granted planning permission on 17th November 1989. The planning permission was granted for the erection of a turkey house and slatted cow shed which both have since been fully constructed. The turkey house is now being used to house 25,000 chickens.

This site (as indicated on accompanying map- Appendix A) is a well-managed, modern site. The site is Bord Bia accredited and is run to meet their highest standards. This poultry enterprise is located within an overall area of c. 0.44 hectares.

1.3 Environmental Impact Assessment Regulations

Environmental Impact Assessment (EIA) Requirements derive from European Communities Directive 85/337/EEC (as amended by Directive 97/11/EC) on the assessment of the effects of certain public and private projects on the environment. The primary objective of the Directive is to ensure that projects likely to have a significant effect on the environment are subject to an assessment of their likely impacts.

The approach adopted in the Directive is to set out Annexes of projects, which must or must be considered applicable to the Impact assessment process. EIA or Annex I projects is mandatory on the basis that these project classes will always have significant impacts on the environment. For Annex II projects each regulatory authority or state must assess each case on an individual basis on the basis of thresholds or site sensitivity criteria.

In addition to transposing the mandatory requirements which apply to Annex I projects Ireland chose to set thresholds for each of the project classes in Annex II. The thresholds were set at levels to distinguish between those projects, which by virtue of their nature, size or location would be likely to have a significant effect on the environment and those, which would not.

Irish implementing legislation addresses the possible need for EIA below the specified thresholds. In summary these require the carrying out of EIA where the competent authority considers that a specific development would be likely to have a significant impact on the environment. In light of the approach adopted by Ireland in relation to Annex II there should only be a limited need for EIA below the thresholds specified.

The Irish EIA system implements the EU Directive through the integration of its requirements into the land-use planning consent system and several other development consent systems covering for example offshore development, roads / motorway construction, light rail systems and the laying of oil and gas pipelines. Requirements on development which may arise from the provisions of legislation such as the European Communities (Natural Habitats) Regulations 1997, the National Monuments Acts 1930 to 1994 and Wildlife Acts 1976 to 2000 are also significant.

This E.I.S is drafted with particular regard to the Planning and Development Acts 2000 – 2010 the Planning and Development Regulations 2001 – 2010 and in particular Article 94 and Schedule 6 of the 2001 Planning and Development Regulations, and the Protection of Environment Act 2003. This E.I.S. was required to accord with schedule 5, Part 2, 1 (e) (i) of S.I. 610 of 2001, which specifies a requirement for an EIS for poultry units exceeding 40,000 places for poultry. It is submitted to provide information that may be helpful to the EPA in making its decision on the application for an IED Licence for the licensable activity.

1.4 Role of the Government and Statutory Bodies

As explained in section 1.3 above the European Communities Directive 85/337/EEC (as amended by Directive 97/11/EC) establishes the core legislation and the responsibility for its implementation falls to each individual government. In the context of this development there are two primary significant competent authorities relevant. Monaghan County Council have responsibility under the Planning and land use legislation to grant permission for the development to proceed and the Environmental Protection Agency who under relevant environmental legislation must licence the proposed facility and supervise the operation of the facility environmentally. As was previously mentioned in section 1.2 planning permission was granted by Monaghan County Council for both of the current poultry houses and the applicant will apply to the Environmental Protection Agency for an Industrial Emissions Activities Licence.

1.5 Content of the Environmental Impact Statement

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 operational 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 beings, fauna and flora
- soil, water, air, climate factors and the landscape
- material assets, including the architectural and archaeological heritage, and 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 nuisances and the elimination ofwaste, 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.

The environmental impact statement will incorporate the following items with a view to identifying, quantifying and proposing relevant mitigation against all of the potential environmental impacts which may arise from the development and operation of the proposed development.

The following issues will be discussed: Description of the proposed development, Planning and development context of the proposed development, scoping and consultation, assessment of alternatives, assessment of environmental impacts and those relative to material assets and human beings.

1.6 The Project Team

Mr Nevin Traynor	Traynor Environmental Ltd	Project Management EIS undertaking
Mrs Angela Kelly	Traynor Environmental Ltd	EIS Undertaking

1.7 PLANNING AND DEVELOPMENT CONTEXT

1.7.1 Planning and Development Context

The following section sets out the planning and development context of the subject site at national, regional and local level.

1.7.2 National and Regional Planning Policies and Objectives

The following are the national and regional planning policies and objectives, which are relevant to the development at the poultry farm of Mr Andrew Keating.

1.7.2.1 Sustainable Development and Agenda 21

Over the past two decades national environment policy has developed in response to growing threats to, and growing concern about, the quality of the environment. Concern for the environment is now central to all policy decisions of Government. New organisations and structures have been put in place, much legislation has been enacted and many voluntary initiatives have been undertaken. However, the move to sustainable development is a long term and evolutionary process but may be as important a stage in human history as the industrial revolution.

The sustainable development agenda is complex and broad, involving economic, social and environmental policies and the linkages between them. The Government is committed to sustainable development. The first comprehensive strategy *"Sustainable Development - a Strategy for Ireland"* was published in 1997 and was framed to direct the growth of the Irish economy and national consumption and lifestyle patterns towards a more sustainable course.

The overall aim of the Strategy is –

"To ensure that economy and society in Ireland can develop to their full potential within a well protected environment, without compromising the quality of that environment, and with responsibility towards present and future generations and the wider international community".

Some key objectives are:

- Ensure that planning policies support sustainable development;
- Minimise waste;
- Promote information, increased awareness and education as a means of supporting wider public participation and shared responsibility for the environment; and
- Accelerate progress towards a more environmentally sustainable society.

The UN Rio Conference 1992, Agenda 21, the Treaty of Amsterdam 1997 and the 2002 Johannesburg Summit commit the Irish Government, government agencies and the local authorities to the concept of sustainable development.

The first Local Agenda 21 guidelines were published in 1995; a further document "Local Agenda 21 – *Toward Sustainable Communities*" was launched in 2001. The primary aims of Local Agenda 21 are to:

- Reduce the amount of energy and raw materials society consumes as well as the pollution and the waste it produces;
- Protect fragile eco-systems and environments;
- Bring about a fairer distribution of wealth both between counties and different social groups.

Agenda 21 is therefore a process of developing a strategy, which integrates environmental considerations into the centre of policy in all aspects of community development.

In terms of sustainable development, the development will assist in maintaining the existing job at the facility within the County Monaghan area while also sustaining a further number of service jobs within the local economy. The production of the poultry product at this site will ensure future product supply for the receiving poultry plant which currently produces 280,000 chickens per week. Furthermore, the very nature of the proposal is agricultural based, with poultry production being an acceptable form of development within a rural area. Given that such a use is directly related to surrounding agricultural activity, the provision of the proposed development at this location is therefore consistent with the proper planning and future sustainable development of the area.

1.7.2.2 National Spatial Strategy 2002-2020

The National Spatial Strategy (NSS) sets out a broad strategic framework for the future spatial distribution of development in Ireland. It aims to deliver more balanced regional development by creating new development opportunities in the weaker regional areas, thus achieving a reduction in disparities between and within regions.

The site which is situated approximately 3.3km South East of the village of Newbliss is located in a quiet rural, agricultural setting. In the National Spatial Strategy the area falls into the more Eastern parts of the Border Region.

Due to its physical nature, location of roads and communications links, the national spatial strategy breaks the border region up into three broad areas.

These three broad areas are

• the north western part of the border region, mainly Donegal

• the western part, mainly Sligo and Leitrim

• the central and eastern parts, Cavan, Monaghan and Louth

In this context the factors critical to the border region's full participation in balanced regional development include the strengthened roles and contribution of Letterkenny/Derry, Sligo and Dundalk, as

new gateways to drive development through enhanced critical mass, accessibility and capacity for development.

Other towns, villages and rural areas will need to develop roles complementary to those of the gateways to ensure that a wider area will benefit from the critical mass in the region provided by the gateways. These other towns, including small towns along the west coast, inland county and larger towns and rural areas in the region are varied in nature and in the development issues they face. Some rural areas are diversifying into tourism and small and medium enterprise/natural resource development, while others have considerable potential for diversification and growth.

Villages and Rural Areas:

I*n the more eastern parts of the region, which are in the journey to work catchments of larger urban and metropolitan areas, rural villages can play enhanced residential and service functions as an alternative to uncoordinated residential development. Investment in local services will be necessary to enhance capacity for new housing and other functions. Such centres play a key role in delivering services and supporting employment in physically remote and peripheral areas. This role should be acknowledged and supported in relevant county and regional strategies through improvements in accessibility and through supporting opportunities for development.*

It is submitted that given the strategic location of the application site within a rural area in the more Eastern parts of the Border Region that the future development and protection of this valuable asset within the local economy should be protected and promoted. The proposed development seeks to ensure the future of existing and potential employment at the facility thus ensuring the future sustainable development of operations on site.

With regard to economic development, the Strategy sets out that *"the characteristics, location, concentration and distribution of future economic activity will have a crucial bearing on the achievement of more balanced spatial development." (Pg 95)*

The development is located in a rural setting of County Monaghan and is able to take advantage of national markets. This is particularly important from an economic point of view given that the facility operates profitably and sustainability on a par with all industry benchmarks and BAT (Best Available Technology) for the sector.

It is vital to the future development of County Monaghan that the County establishes itself competitively in rural areas and competes effectively nationally. The development which significantly adds to the economy of the area is of major significance in assisting in achieving this and in allowing County Monaghan develop and achieve a more balanced form of spatial development.

1.7.2.3 Border Regional Authority Planning Guidelines 2010 - 2022

These Guidelines aim to respond to development trends and associated issues within the Border Region. *This is the second time that the Regional Planning Guidelines have been prepared for the Border Region and now cover the period 2010 – 2022. The Guidelines build on the experiences and progress made during the period of the previous Guidelines, and also incorporate the requirements of relevant new European Directives, National Plans and Strategies that have been published in recent years.*

With regard to agriculture and rural development within the border region the guidelines state that "the Agriculture sector, although it remains a significant sector in the Region, has been in decline for the last number of years. The majority of agricultural activity in the Region is based around small dairy and cattle farms, followed closely by fringe farming in the North West of the Region. Agricultural incomes in the Border Region, like the rest of the BMW Region, are substantially lower than in the S&E Region. The need for on-going State intervention to support rural development and sustainability is vital, but Ireland and this Region must respond to the changing nature of agriculture and the food sector in particular, in order to survive. It is considered that the Region possesses a number of inherent advantages within emerging economic drivers and, in particular; renewable energy, agri-food industries where value is added, clean energy, tourism and services. Sustainable vibrant rural communities are critical for the Region."

The development will help promote Newbliss's diversity and self sufficiency as a key economic and employment centre within the region and thereby making a contribution to balanced regional development. This is consistent with key policies set out in the Guidelines and the proper planning and sustainable future development of the area.

1.7.3 Local Planning Policies and Objectives

The following section shall set out the relevant plan policies, aims and objectives of the statutory local plan to affect the application site, the Monaghan County Development Plan 2013-2019.

1.7.3.1 Monaghan County Development Plan 2013 - 2019

The Monaghan County Development Plan 2013–2019 (Incorporating the Development Plans for the towns of Monaghan, Carrickmacross, Castleblayney, Clones and Ballybay) sets out an overall strategy for the proper planning and sustainable development of County Monaghan.

In chapter 5 of the plan which is Economic Activity, 7 key objectives for Agriculture within County Monaghan are set. The objectives which are relevant to this development are outlined below.

AGO 1: ***Ensure that all plans and projects relating to agriculture are subject to policies AAP1-AAP5 contained within Chapter 4, Environment and Heritage, of the Monaghan County Development Plan 2013-2019.***

The development is consistent with objective AGO 1 of the Development Plan as it is not subject to an Appropriate assessment as it is not directly connected with or necessary to the management of a Natura 2000 site, or likely to have a significant effect, either directly or indirectly, on a Natura 2000 site, either alone or in combination with other plans or projects.

AGO 2: ***Encourage the continued use of agricultural farm holdings and buildings.***

The development is consistent with objective AGO 2 of the Development Plan as Mr Andrew Keatings current 2 poultry houses located on the same site which borders the two townlands of Aghareagh and Drumary (Aghareagh, Doohat, Co. Monaghan and Drumary Newbliss Co. Monaghan) will continue to be used to house 25,000 broilers each for high quality meat production and there are no planned changes to infrastructure and operations on site.

AGO 3: Protect high quality agricultural land within the county.

The development is consistent with objective AGO 3 of the Development Plan as poultry manure and soiled water generated from the poultry operation will be land spread in accordance with the requirements under S.I. 378 of 2006 European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2006.

AGO 4: ***Protect soil, surface water, groundwater, wildlife habitats, conservation areas, rural amenities and scenic views from adverse environmental impacts as a result of all agricultural practices.***

The development is consistent with objective AGO 4 of the Development Plan as there are no direct surface water or ground emissions from the facility from the point of view of solid waste applicable to land. Poultry manure generated at the site is sent for land spreading. All soiled surface water is diverted to soiled water storage tanks and spread on land. All land spreading is carried out in accordance with the requirements under S.I. 378 of 2006 European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2006.

When the Nitrates regulations are applied for the spreading and holding of soiled waters there is enough capacity to store soiled water within the 3 soiled water holding tanks on-site and enough land to land spread same. Therefore, soiled waters can be managed in an environmentally sound manner at this site with no adverse environmental impacts.

The site is located below the level of the local road (L 63400) therefore the sheds do not have a major impact on scenic views.

AGO 5: Address the infrastructural deficit so as to serve the needs of agriculture, in co-operation with the appropriate agencies.

The development is consistent with objective AGO 5 of the Development Plan as Mr Andrew Keating's poultry farm currently has sufficient infrastructure in place for the rearing of 50,000 chickens.

AGO 7: ***Support the development of value added agricultural based activities and agri-food enterprises.***

The development is consistent with objective AGO 7 of the Development Plan as the facility has significant economic and social off-sets for the local rural economy and community, providing a much under estimated but valued asset within the Newbliss area. The economic and social gains which the facility brings to the local area are significant not only through employment but also in service procurements and consumables procurement.

2.0 DEVELOPMENT DESCRIPTION

2.1 Introduction

As described in the introductory section of this document, the development comes about as a result of the need for the facility to supply a quality product to Western Brand Mayo Poultry processing plant and a need to ultimately meet local and national food production requirements.

The development is currently operating to its capacity of 50,000 birds, is Bord Bia Accredited and is therefore able to meet the highest standards in terms of Animal Welfare.

2.2 The need for the development

Mr Andrew Keating has since 2013 operated to a very high standard, a poultry operation at the site of the proposed development. Mr Keating commenced operations in 2013 and the poultry operation has reached its target throughput and fully intends to continue to operate at the level of 50,000 broilers for the next number of years. In relation to the issue of the Environmental obligations of Mr Andrew Keating's poultry farm, under the Waste Management Act and the EPA Acts, Mr Keating must obtain an Industrial Emissions Activity Licence for the poultry operations carried out on the farm. The poultry farm needs to ensure full compliance with the proposed IEA Licence to protect the local jobs economy and the financial bearing the farm has on the surrounding area. Mr Andrew Keating and his poultry operation are regarded as a valuable addition to the local economy and its existence is vital to supporting commercial entities, families and services locally. This will be further expanded in the Material Assets section (5.8) of this document.

Figure No 1 – Site Location

3.0 SCOPING AND CONSULTATION

3.1 Introduction

This section deals with the process, which endeavoured to identify and emphasise the issues which are likely to be important in the EIA and to eliminate those which are not. In general, the scope of the EIA relative to the project has been drawn up by the professionals on the project team. In the case of this project the scoping was in general informal.

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. With 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 impact of the poultry growing operation on the local communities.

Natural Environment

The site of the existing poultry operation is located in an area of poor ecological value. The site is not located or boarding any sensitive ecological areas including Special Area of Conservation or Special Protection Area.

The impacts on these land and plants 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 and available resources such as soils, utilities etc. The operation is situated on land currently owned by Andrew Keating.

Architecture, Archaeology and Cultural 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.

3.2 Guidance

In relation to this development no specific technical or administrative guidance was sought.

Industrial Emissions Directive (IED)

The European Commission has recently recast a number of existing Directives, covering emissions from industrial operations, into a new Directive on Industrial Emissions (Integrated Pollution Prevention and Control) (Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control), also termed the IED. This new Directive incorporates substantial elements from, and changes to, existing Directives on:

- Integrated pollution prevention and control (IPPC);
- Limitations on VOC emissions from use of organic solvents (Solvents Directive);
- Emissions from large combustion plants (≥50MWth);
- Waste incineration and waste co-incineration plants;
- Waste from the titanium dioxide industry.

The range of industrial activities requiring permits (e.g. IPPC and waste licences) has been expanded slightly in the IED but the descriptions and thresholds for the vast majority of licensable activities are unchanged. However, Waste Management activities that are subject to permitting are now set out in much more detail. There will be no activities at the proposed facility for which a waste licence would be required. Most of the provisions of the new Directive are to be brought into force by Member States by January 2013, with the remaining provisions to be enforced by January 2016.

The new Directive contains special provisions for large combustion plants with a total rated thermal input of ≥50 MW, irrespective of the type of fuel used. Most of the emission limit values are the same as those in the exiting Directive 2001/80/EC, but there are changes in emission limit values for SO_2, NO_X and dust, with reduced values coming into force for new plants from January 2013. There is also the option for Member States to apply minimum rates of desulphurisation in special circumstances, and the Commission will, by end of 2019, review the possibility of applying minimum rates of desulphurisation taking into account BAT and the benefits obtained from reduced sulphur dioxide emissions. The proposed facility will have a maximum rated thermal input of 40 MW and thus will be exempt from this requirement. The role of the Competent Authority (the EPA in Ireland) in licensing and enforcement is set out in more detail in the IED. One of new requirements is that within 4 years of the publication of decisions on BAT conclusions relating to a particular activity, the Competent Authority must ensure that all the permit conditions for the installations concerned are reconsidered and, if necessary, updated. This could lead to an increased frequency of licence reviews. There is an increased emphasis on the protection of soil and groundwater, and on the requirements on licensed operators to protect and remediate soil and groundwater at the time of site closure.

4.0 ALTERNATIVES ADDRESSED

4.1 Introduction

The Planning and Development Regulations 2001, specifies the information to be contained within an EIS. Schedule 6 1(d) specifies that an EIS shall include *"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."*

Therefore, as part of the initial planning stages for the proposed development, a number of alternatives were evaluated for the development at Mr Andrew Keating's farm. These alternatives included other sites, other uses for the site chosen and process changes taking account of environmental impacts.

4.2 Alternative

The do not expand alternative in this instance due to the fact that it is an operational site would be to shut down the process altogether to avoid the licensing system. If Mr Keating adopted this approach there would have been a negative impact on local economics, on the local farming community on the local workforce and on locally generated revenues.

The Company will not have remained in operation as it was essential for the Company to develop the site to provide the facility to meet the specific demands of the Western Brand Mayo poultry processing facility and the general demands for poultry products nationally. This alternative would also negate the promotion of environmentally sustainable practices at the site and would mean that the Company would not exist.

4.3 Alternative Sites

The current site of the proposed development has already been in existence in its current form under Andrew Keating since 2013. The site itself is geographically located in a rich agricultural hinterland proximate to its supply base and to the processing plant for its produce. No more suitable alternative sites are proposed or have been evaluated in the preparation of this report.

4.4 Alternative Processes

The production of chickens has been extensively developed in the country and throughout Europe for many years and developmental change has been minimal in general. The processes are in essence the same and it is clear that alternative processes would not be in adherence with the accepted norms so No alternative processes have been addressed. The management of raw materials and utilities are constantly been reviewed with a particular focus on sustainability and energy efficient initiatives for the operations and for the management of the onsite generated waste materials.

5.0 ENVIRONMENTAL IMPACTS

5.1 Human Beings

As a result of the fact that the development is in operation for some time and there have been No recent process changes there are not anticipated to be any new sources of impact on human beings. All of the impacts will already exist. Existing positions onsite will be sustained foot of the continuation of the operations of the facility.

The development will also ensure sustained supply to the processing plant in Ballyhaunis, Co.Mayo which supports an existing production of 280,000 chickens per week people.

The National economy will benefit too as a result of the poultry farm maintaining its high standard of operations due to its taxation contributions and through its activities will assist in bolstering the National Export volume and inter-European trade figures.

5.1.1 Land-Use

The development does not take up any more land than that which exists at present.

5.1.2 Employment

In order for this poultry farm to remain competitive and in existence the farm management have deemed that compliance with all statutory requirements for the development is a necessity.

No construction jobs will occur as a direct result of the development directly. Existing employment provided by the poultry farm in the areas of stock provision, feed supply and maintenance will be maintained as a result of the development.

5.1.3 Settlement and Social Patterns

No effect to existing settlement patterns is anticipated as a result of the development.

5.2 Flora and Fauna

5.2.1 Introduction

A walk over survey of the environs of the Poultry installation was carried out by Mr Nevin Traynor of Traynor Environmental Ltd at the site on 22nd January 2014. The aim of the survey was to determine the impacts that the existing development has had and will have on the existing flora and fauna.

5.2.2 Methodology Employed

A site walkover survey was carried out on 22nd January 2014 in order to establish the current flora and fauna of the environs of the installation and to establish whether there is a requirement for a full Flora and fauna (Ecological) study at the site with respect to the development. In line with that a basic screening exercise was also conducted at the site to establish developmental effect on flora and fauna at the site.

This assessment concluded that the site was reflective of the existing agricultural hinterland common in the area. The site is not on a source receptor pathway to any significant ecosystem locally. The site is located approximately >600m North of Bunnoe River which is not designated as a National Heritage Area (NHA), Special Area of Conservation (SAC) or Special Protected Area (SPA). No significant species in the region were sighted on the site inspection. Under the Water Framework Directive, the current ecological status assigned to Bunnoe River is moderate. The target is to achieve Good ecological status by 2021.

The site is also located approximately >1.7 kilometres North West of Annaghmakerrig Lough which is also not designated as an NHA, SAC, or SPA. The development is located too great a distance from both Bunnoe River and Annaghmakerrig Lough to have any effect on the ecological standing of the Lough itself.

5.2.3 Results

The basic result of the assessment and site walkover is that the facility is existing and has been operated by Mr Andrew Keating as a poultry farm since 2013. No evidence was apparent that the existing operations of the site had in any way compromised the ecological standing of the areas proximate to the site. The basic screening process identified that there is no potential for the development and its operations to impact on local surface waters as they are located too great a distance from the site and there is no source receptor pathway between both.

5.2.4 Impacts of the Development on the Flora and Fauna

Owing to the fact that this development is already in place, it is impossible to accurately determine the extent of impacts on flora and fauna owing to the lack of base-line data obtained before the development was in place. It was possible, however, through the use of aerial photographs, to recreate a speculative view of those habitats and species likely to have occurred here in the past. Those habitat types likely to have occurred here in the past are indicative that it is unlikely that any populations of protected species of flora or fauna have been lost or irreparably damaged by this development.

The primary concern with regard to this development, both in the past and in the future is the potential for contamination of local drains with waste material from the processes taking place on site – primarily waste management and poultry house wash-down

The potential presence of quantities of dead birds. This can most likely result in a high population of scavengers and has the potential for increasing the spread of bacteria and disease through animals scavenging on blood and other waste products. There was a large number of bait traps noted. This is in-line with the requirements of the Bord Bia Quality Assurance scheme and is viewed positively as management of a potential situation.

5.2.5 Mitigation Measures and Recommendations

It is suggested that the fact that there will be No new construction activities at the site then No additional planting is required to support existing biodiversity.

The presence of both dead birds stored in bins at the facility was noted and coupled with the presence of volumes of feed onsite, will likely lead to sustained or increased vermin populations around the facility. In addition to this, other scavengers, such as various species of crow, foxes and feral cats may be feeding here. This may be a source of bacteria and disease, which could be spread into the greater environment, particularly by the large numbers of crows observed. In order to mitigate this problem/potential problem, all dead birds must be stored safely in closed containers and removed regularly. A vermin management and control plan should be activated for the site and should be inspected and updated regularly.

Recommendations in these areas must be implemented in conjunction with Environmental Protection Agency licence requirements and Department of Agriculture approval and utilizing Department of Agriculture recommended terminologies.

5.3 Soils, Sediment and Geology

5.3.1 Introduction

Due to the fact that the site is existing and that the existing site area of 0.44 hectares only is going to be used for the development the scoping study of the site by the professionals employed deemed the impact on soils sediment and geology to be generally minimal. It was decided to carry out a basic desktop assessment of the site soil sediment and geology and report on the associate impacts. This study was undertaken by Traynor Environmental Ltd on behalf of Mr Andrew Keating.

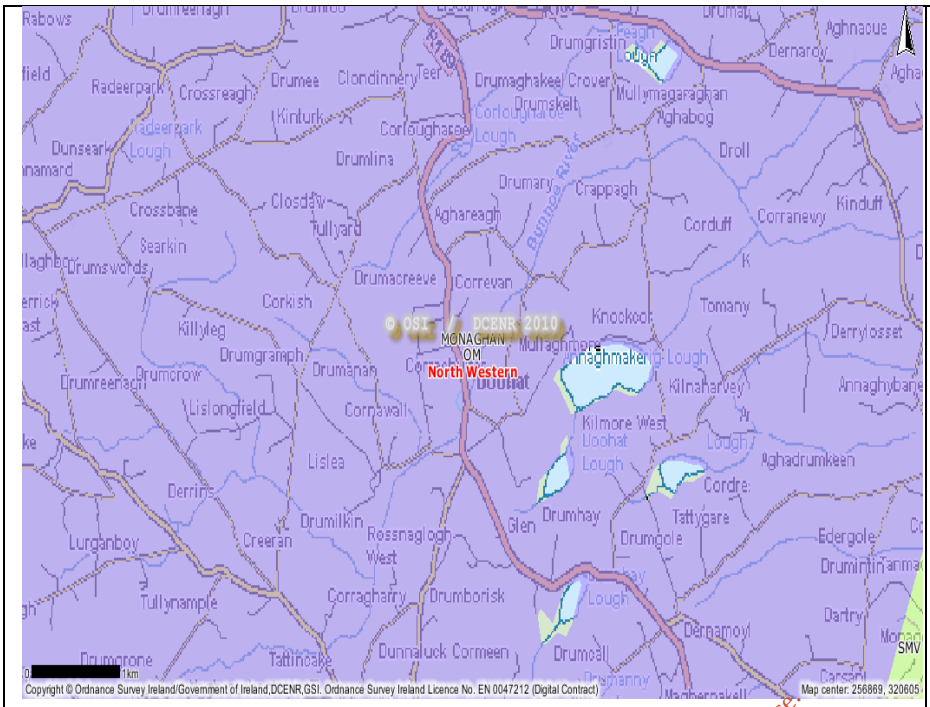
5.3.2 Methodology

A basic internet search was carried out utilizing the Geological Survey of Ireland Website to determine the site base geology and soil and sediment origins.

5.3.3 Results

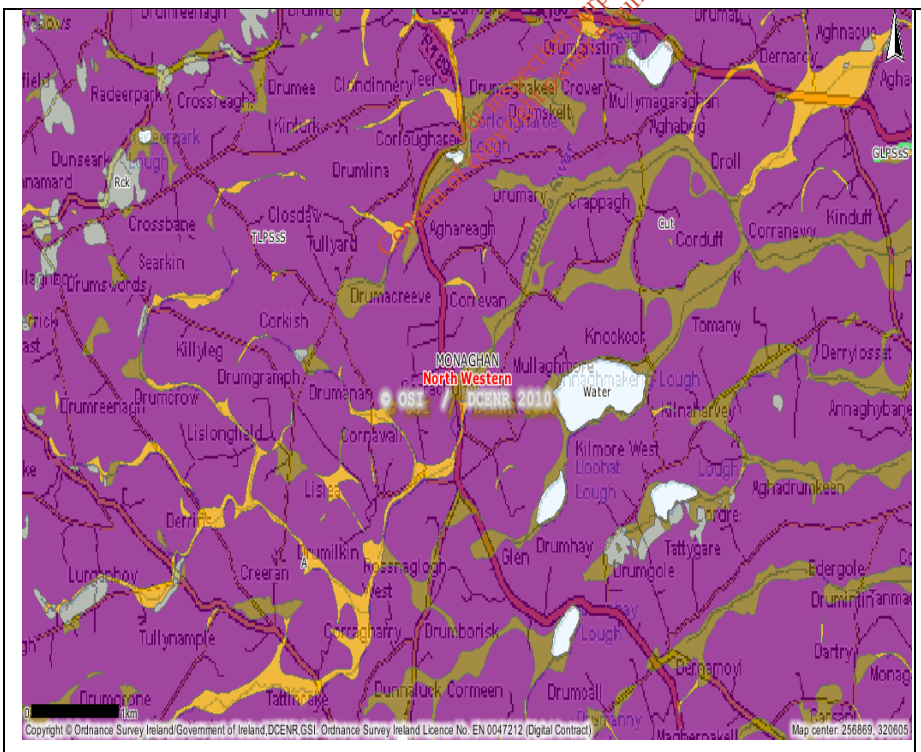
According to GSI's National Draft Generalised Bedrock Map the bedrock underlaying the site is Ordovician Metasediments. From the Teagasc subsoils map the site is classified as Till Derived Chiefly From Lower Palaeozoic Rocks.

Bedrock Map



From the GSI Bedrock Map Site is classified as OM – Ordovician Metasediments

Teagasc Subsoil Map



From the GSI Teagasc Subsoil Map Site is classified as Till derived chiefly from Lower Palaeozoic Rock.

The soil association of the site is composed of the principal soil of Gleys (50%) and associated soils of Acid Brown Earths (40%) and Interdrumlin Peat and Peaty Gleys (10%).

5.3.4 Impacts on Soil, Sediment and Geology

There will be no significant impacts on soil, sediment and geology via the existing development at the site. Impacts in general will proliferate at two junctures in any development namely the construction phase and the operational phase of the development.

No additional construction is required for the development at this stage. Blasting or excavation into the bedrock surface was not required. Therefore, no impacts are estimated to have occurred on the underlying geology nor are any anticipated to occur during the proposed construction phase.

The facility in operation can potentially result in impacts on soils and subsoils as a result of emergency scenarios such as spillages, firewater retention etc.

The proposal to land spread the liquid wash water (Soiled Water) and the solid may impact negatively on the destination land. All spreading of organic material must be carried out in accordance with the EPA and Dept. Of Agriculture guidelines and full traceability for such actions should be provided. The management of waste materials, waste oils (generator oil in particular) and chemicals onsite is essential to ensure adequate protection is in place for soils and sediment in particular.

5.3.5 Mitigation Measures

Mitigation measures and/or factors described under the Aquatic Flora and Fauna and Fisheries – for the control and handling of oil and the design of hardstand and drainage systems for the operational phase are equally applicable to the control of pollution of soils and sediment.

All contractors or site operators managing the recovery of waste material from the site must bear cognizance to the requirements of “SI610 of 2010 EUROPEAN COMMUNITIES (GOOD AGRICULTURAL PRACTICE FOR PROTECTION OF WATERS) REGULATIONS 2010”. All contractors and site management must be familiar with the requirements of this legislation and in the case of this facility where an IEA licence will be required cognisance to the requirements of this statutory instrument must form the basis of environmental procedures for waste management.

5.4 Groundwater and Surface Water

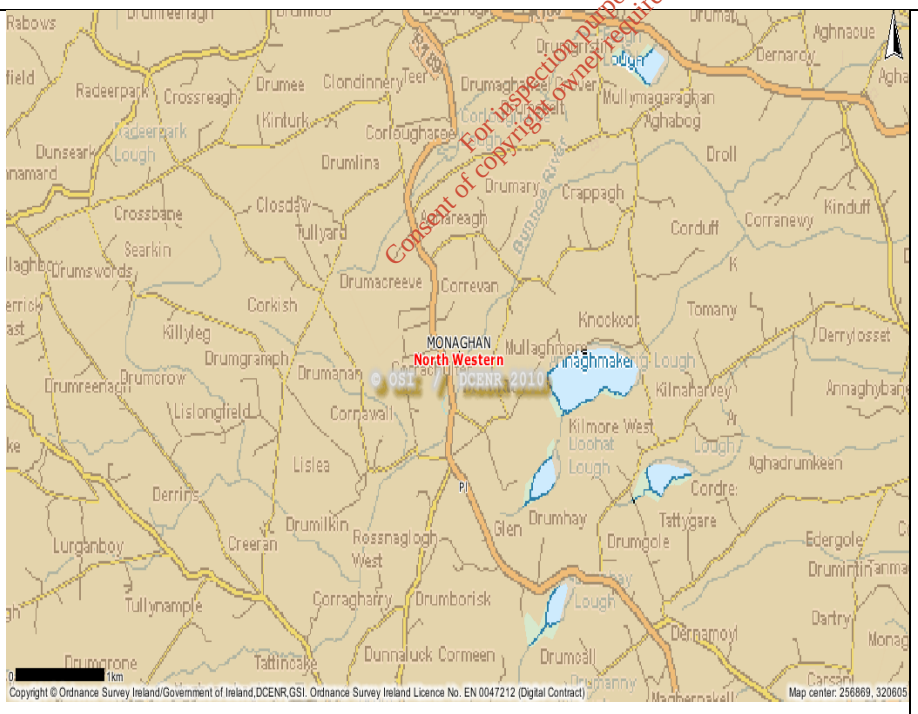
5.4.1 Introduction

An assessment of the proposed development and its impacts on the local ground water and surface water quality was carried out by Traynor Environmental Ltd on behalf of Mr Andrew Keating. The assessment involved a review of the site location and its relevance to the local groundwater and surface water infrastructure. A list of the potential impacts that the facility has had and that the development will have are discussed. Mitigation measures are suggested for the development and operation. In addition, a basic internet search was carried out utilizing the Geological Survey of Ireland Website and the findings of the search are stated below.

5.4.2 Groundwater/Aquifer Map and Vulnerability Map

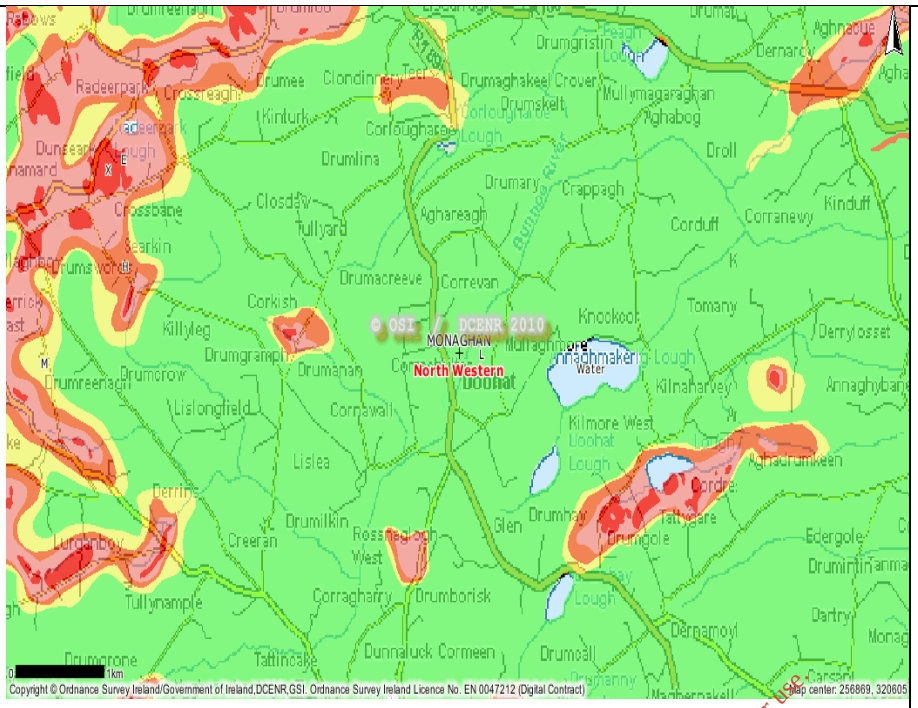
According to GSI the aquifer classification appropriate to the site and the surrounding area is a Poor Aquifer (PI) Bedrock which is generally unproductive except for local zones with a vulnerability rating of ow vulnerability. As the licensable activity, will operate on a dry manure basis, whereby the manure will be removed from the houses after each batch and transported off site by a licensed contractor, and given the low vulnerability of ground water resources in the area, there is minimal risk to ground water supplies in the area of the site.

Groundwater/Aquifer Map



From the GSI Groundwater Aquifer Map Site is classified as Pi – Poor Aquifer-Bedrock which is Generally Unproductive Except for Local Zones

Vulnerability Map



From the GSI Vulnerability Map Site is classified as Low

5.4.3 Existing Site Conditions

The site is located in the North Western River Basin District and as per section 5.33 above the site is located on a poor aquifer with bedrock generally unproductive except for local zones.

Water Use on site is facilitated by public water. There is a private well located on – site however it is not in use.

5.4.4 Free Surface water Drainage from the site

The existing clean and soiled areas of the site from which storm water drains to surface water outlets, are defined below–:

Surface water from the roofs is directed to a soakaway which is located between the two house on the site.

The site of the poultry farm is located approximately <600m North of the Bunnoe River which is a catchment of the River Erne. As per previous section of this report it must be noted that the development will not impact on the ecological status of Bunnoe River which has been assigned moderate ecological status under the water framework directive.

Soiled runoff water is generated only at times of wash down when the soiled bedding is brought to the front of the houses and loaded onto vehicles for removal to composting.

The poultry farm is located too great a distance from the Bunnoe River to have an impact on the rivers ecological standing. To date no formal analysis has been carried out on the surface water runoff.

Mr Andrew Keating's poultry farm located on the borderline of the townlands of Aghareagh and Drumary County Monaghan (Aghareagh, Doohat, Co. Monaghan and Drumary, Newbliss, Co. Monaghan) has been operated by Mr Keating since 2013 and has had no adverse effect on the surrounding water features to date. The site appears to be well run and maintained and it is accredited to the An Bord Bia farm Quality assurance scheme.

5.4.5 Direct or accidental discharge of waste or washings

The development through its operations produces a proportionately large volume of washings on days when the houses are being cleaned down. The washings are directed to wash water holding tanks from where the washings or soiled waters are vacuum tankered to available lands for land spreading. It is also possible that the waste material itself (in the form of a manure @ approximately 65% moisture content) could infiltrate the groundwater sources and cause pollution however given the very dry nature of the material and the extent of the concrete hard stand areas set aside for the loading of the waste material, the risk of environmental pollution occurring would be minimal.

The main risks posed to groundwater and surface water from the operations will arise from accidental / emergency spillage from either the collection network for the foul materials or from the on-site tankage. It is imperative that mitigation measures are installed at the site to pre-empt such occurrences.

5.4.6 Mitigation Measures

It is imperative that impervious hard standing is provided throughout the site to enable the full collection of surface water to the surface water collection network.

It is suggested that all provisions are made to ensure that no contaminated material is stored on a site in a fashion that may undermine the environmental security of the collection system.

All drains, guttering and other collection apparatus must be inspected at regular intervals. All tank and storage vessels must be tested and a programme for tank and pipeline inspection should be initiated to mitigate against the risk of leakage.

The clean down operation poses a risk to the surface water system and full precautions should be taken to mitigate against the risk of spillage from the operation. This should include as a minimum:

- Functional high level alarms and holding tank security
- High level over-flow collection where applicable
- Bunding of the entire treatment area to facilitate the capture of all liquids should any particular tank fail. This should be calculated to hold at least 110% of the capacity of the largest tank within the plant.
- Lockable valves should be placed on tanks to give added protection whilst loading or unloading the tanks.

All other tanks within the facility must be bunded and all diesel tanks must have adequate spill proof dispensing operations to protect surface water amenity proximate to the site.

5.5 Air

5.5.1 Introduction

Process emissions to the atmosphere from a conventional poultry farm include the expelling of warm air from the ventilation system in the buildings and odour and gas volatilisation from the organic manure. Increased emissions may at times be associated with loading of poultry and/or the loading of poultry manure. The potential impact of poultry manure is deemed to be a minor issue due to the fact that it happens only once in every c.8-10 week cycle (6-8 weeks production plus 2 weeks empty). In any event it only takes c. 4 hours to completely empty the litter from the house and have it removed from the site.

There are no direct atmospheric emissions from the site to air and with the exception of fugitive emissions from the facility emissions to air are not considered significant.

5.5.2 Receiving Environment-Air

5.5.2.1 General

The poultry facility is located along a local road approximately 3.3 km South East of Newbliss Co. Monaghan. The facility is currently an operational poultry farm. The site is situated in an agricultural area with a small number of dwellings located to the North and South and East of the facility. The site is located approximately >600m from the Bunnoe River Stream and as was previously mentioned is therefore located too great a distance to have any impact on the Bunnoe rivers current ecological standing. The site is not located close to sites of archaeological significance. The land use in the area is predominantly agricultural with traditional farming practices forming the primary land use. The current project involves the completion of an Environmental Impact Statement clarifying the nature of all current and future impacts that the facility currently has and will have on its surrounding environment.

5.5.2.2 Baseline Air Quality

No baseline air quality was completed for the proposed development as the atmospheric emissions from the facility are not significant. There are minor unquantified fugitive emissions from the facility.

5.5.3 Potential Impacts of the Proposal

5.5.3.1 Construction Phase

There will be no additional construction as a result of the proposed development therefore the development will not result in any additional environmental impacts through construction activities.

5.5.3.2 Operational Phase

5.5.3.2.1 Scheduled Emissions

Regarding operations at the proposed development, the only scheduled emissions will be from space heating, ventilation and a back-up tractor generator. The impact on air quality from the ventilation systems, space heating and the back-up tractor generator is regarded as negligible and fugitive emissions which are not quantifiable. The impact of the operating site on air quality due to odour is a significant factor in relation to poultry operations in general and is location sensitive in all cases. As a result of the management practices carried on at the site and the manure and other waste management procedures there has never been any odour complaints to or about the site in question.

5.5.3.2.2 Climate

There is a potential for impacts to climate as a result of any development that requires fuel and energy. These impacts are the generation of greenhouse gas emissions (principally carbon dioxide and oxides of nitrogen) from traffic and electrical supply.

The potential effects of climate change on a global scale have been investigated by the Intergovernmental Panel on Climate Change (IPCC). The resulting impacts in Ireland are outlined in the National Climate Change Strategy and recently by the EPA and include the following:

- Significant increases in winter rainfall, of the order of 10% in the southeast, with a corresponding increase in the water levels in rivers, lakes and soils. Serious flooding more frequent than at present.

- Lower summer rainfall, of the order of 10% in the southern half of the country. Less recharge of reservoirs in the summer leading to more regular and prolonged water shortages than at present. Loss of bog land due to regular water deficits.

- Increased agricultural production, with new crops becoming more viable and potentially reduced agricultural costs. Grass growth could enjoy beneficial effects with an increase in 20% possible with higher temperatures and changes in rainfall patterns.

It is recognised that Ireland cannot, on its own, prevent or ameliorate the impacts of climate change. However, the National Climate Change Strategy states that Ireland must meet its responsibilities with regard to reducing CO2 emissions in partnership with the EU and the global community.

The development will not result in a more rapid run off of rainwater than occurs at present. The run off will be drained off site via drainage infrastructure. This is further discussed in the water section.

The site is located in Air Quality Zone D which is rural Ireland. The baseline survey results suggest that air quality in the vicinity of the proposed development is very good (www.epa.ie) and shows typical levels for a rural area with all pollutants within the relevant Irish and EU limits. The air quality may improve slightly in future years due to improvements in engine technology and greater controls on petrol, diesel, coal and gas composition and purity. In relation to dust, non-development of the site would result in no movement of soils/sands and no construction activity and therefore no dust creation as a result of construction works. In relation to odours, it is not anticipated to be any greater in reality atmospherically than the current odour impact. The use of practical mitigation techniques will minimise any impact associated with odours at the existing site.

5.5.4 Remedial or Reductive measures

5.5.4.1 Construction Phase

There will be No construction activities carried on as a result of this proposed development.

5.5.4.2 Operation Phase

Atmospheric emissions are not anticipated to increase in the development to levels where odour issues become problematic. Experience on poultry installations nationwide has been that those farms subscribing to management systems like the Bord Bia quality assurance scheme have brought best practice to the operation of the facility.

Emissions of pollutants from road traffic will remain the same for the facility as there will be no changes to traffic volumes coming to and from the site. For the majority of vehicle-generated pollutants, emissions rise as speed drops. Emissions are also higher under stop-start conditions when compared with steady speed driving. The free flow of the traffic in the vicinity of the proposed development is essential in order to minimise the generation of traffic related pollutants. This is not an issue for the operation of this site as the site is located off a quiet local road with little traffic volume therefore there is an easy flow of traffic coming to and from the site and this will not change in the future.

It is envisaged that the development will not have a significant impact on the surrounding air quality. However, as discussed previously a number of mitigation measures have been suggested.

5.5.4.3 Climate

Road traffic and power usage would be expected to be the dominant sources of greenhouse gas emissions as a result of the development. Vehicles and power used to operate the plant will give rise to CO2 and N2O emissions as a result of the development.

With reference to relevant evaluation criteria such as the Kyoto Protocol, which has set objectives to be achieved by 2008 – 2012, GHG emissions as a result of this proposal will be negligible in terms of traffic emissions.

There is a potential for impacts to climate as a result of this development that requires fuel and energy. These impacts are the generation of greenhouse gas emissions (principally carbon dioxide) from the on-site heating systems (boilers, etc.) and the energy source, which may be located a considerable distance from the site.

5.5.5 Predicted Residual Impacts of the Development

5.5.5.1 Construction Phase

There will be no new construction phase in this development as it stands. .

5.5.5.2 Operation Phase

Traffic

There will be no residual impact on atmospheric emissions from the facility as a result of the fact that there will be no requirement for extra feed, extra waste movements and extra stock movements to and from the site as result of the development.

Odour

Owing to the fact that there will be no increased waste volumes on site there will be no increased potential for the generation of odour on site. Therefore it is not anticipated that this will be an issue for the site. Recommendations are made however for the correct management of potential odour pollutants on site

Air quality emissions

As described above there is potential for increased impacts from the facility with regard to ammonia levels and dust levels from the facility. Correct mitigation will be required to ensure that these levels do not become problematic.

5.5.5.3 Climate

All space heating and energy requirements for the development should be designed in accordance with best practice. The Building Regulations 2002 *"Technical Guidance Document Part L – Conservation of Fuel on Energy Dwellings*" should be used as a reference for best practice in order to reduce the impact of the proposed development on greenhouse gas emissions.

Significant consideration has been given to the environmental impact of greenhouse gas emissions at the developmental design stage and the heating, cooling and energy system will be operated in accordance with principles of best practice or within consent conditions.

Worst Case Scenario

For traffic-derived pollutants, the "worst-case" scenario consists of gridlock conditions with large volumes of traffic on the road simultaneously. This is not forseen for this operation given that if all contributing service

providers arrived simultaneously to the site there would only be approximately 10 vehicles present and the development is located on a quiet local road (L63101)

For fugitive emission points such as the heating and ventilation, this will be operated at or within the IEA licence emissions limit values though no specific control is anticipated in the licence conditions. In addition to improve dispersion and reduce the effects of building wake effects, the ventilation systems must be maintained regularly.

For odours from the operating facility a number of key odour management strategies are suggested.

5.5.6 Monitoring

5.5.6.1 Construction Phase

There will be no requirement for construction monitoring at the site as no construction will take place as a result of the activity.

5.5.7.2 Operational Phase

If the levels of dust become problematic from the site, dust monitoring will be carried out during the operation phase of the development if deemed necessary by the EPA. If the level of dust is found to exceed 350mg/m^{2}day in the vicinity of the site, further mitigation measures will be incorporated into the operation of the proposed site.

Back-up Generator Flue monitoring, combustion efficiency and boundary odour testing can be performed in accordance with the requirements of the IEA licence and if deemed necessary by the EPA.

Boundary odour monitoring in accordance with the requirements of the IPPC licence will be performed to ensure no odour cause impact on the surrounding area.

5.5.7 Reinstatement

Not Applicable

5.6 Odour

5.6.1 Introduction

Site specific odour assessment were not deemed necessary for the proposed site

Establishment of odour impact criterion for the proposed development is essential however to enable an understanding of impacts should they arise at the facility as a result of the animal numbers housed at the facility.

Odours from poultry operations arise mainly from the volatilisation of odourous gases from:

- The surfaces of non-quiescence processes above the working height of the tank/channel, etc,
- Anaerobic decay of organic debris upon quiescence surfaces including organic matter

- Waste handling operations including collection, storage and transport of raw/processed waste offsite,
- Inefficient odour control/abatement equipment operation and design including loose fitting covers, inefficient extraction and odour control unit failure.
- Contaminated surfaces with Fat, grease and oil,
- Open dead bird storage containers and spillage.

Any process change which will improve / reduce the nature of the elements above will lead to reduction in potential odour release.

Some of the compounds emitted from poultry units are characterised by their high odour intensity and low odour detection threshold. A sample of a report carried out in the Netherlands, United Kingdom and USA ranking generic and environmental odours according to the like or dislike by a group of people professionally involved in odour management is illustrated in Table below.

Generic odours	*Hedonic score* [1] **Dravnieks, 1994**	**Ranking** [2]	**Ranking** [2]	**Ranking** [2]	**Environmental odours**	**Ranking** [2]	**Ranking** [2]	**Ranking** [2]
Descriptor	**USA**	**UK median**	**UK mean**	**NL mean**	**Descriptor**	**NL mean**	**UK mean**	**UK median**
Roses	3.08	4	4.4	3.4	*Bread Factory*	1.7	2.5	1
Coffee	2.33	3	4.5	4.6	Coffee Roaster	4.6	3.9	2
Cinnamon	2.54	4	4.9	6	Chocolate Factory	5.1	4.6	3
Mowed lawn	2.14	4	4.9	6.4	Beer Brewery	8.1	7.7	6
Orange	2.86	4	5.2	5.8	Fragrance & Flavour Factory	9.8	8.5	8
Hay	1.31	4	5.9	7.5	Charcoal Production	9.4	9.2	8
Soap	0.96	7	7.8	7.3	**Green Fraction composting**	14	10.3	9
Brandy		8	8.8	7.8	Fish smoking	9.8	10.5	9
Raisins	1.56	9	8.8	7.9	Frozen Chips production	9.6	11	10
Beer	0.14	8	9.5	9.3	Sugar Factory	9.8	11.3	11
Cork	0.19	9	10	10.5	Car Paint Shop	9.8	11.7	12
Peanut Butter	1.99	10	10.4	11.1	**Livestock odours**	12.8	12.6	12
Vinegar	-1.26	10	13.3	14.8	Asphalt	11.2	12.7	13
Wet Wool	-2.28	14	14	14.1	Livestock Feed Factory	13.2	14.2	15
Paint	-0.75	14	14	14.4	**Oil Refinery**	**13.2**	**14.3**	**14**
Sauerkraut	**-0.6**	**15**	**14.6**	**12.8**	Car Park Bldg	8.3	14.4	15
Cleaning Agent	**-1.69**	**15**	**14.7**	**12.1**	Wastewater Treatment	12.9	16.1	17
Sweat	-2.53	15	16.6	17.2	Fat & Grease Processing	15.7	17.3	18
Sour Milk	-2.91	18	18	17.5	Creamery/milk products		17.7	10
Cat's Pee	-3.64	19	18.8	19.4	Pet Food Manufacture		17.7	19
Sewer odour	**-3.68**	**19**			Brickworks (burning rubber)		17.8	18
-		-			**Slaughter House**	**17**	**18.3**	**19**
-	-	-			**Landfill**	**14.1**	**18.5**	**20**

Notes: *Source: Draft Odour H4-Part 1*, Integrated Pollution Prevention and Control (IPPC). (2004). Environment Agency, Bristol, UK.

[1] The higher the positive "value", the more pleasant the odour descriptor and similarly below, the greater the negative value, the more unpleasant the odour descriptor , [2]Ranking in order of dislike ability.

As can be observed from Table above and using the Dutch based ranking system, Wastewater treatment plants (WWTP) have a mean raking of 12.90 in terms of dislike. Other odours with similar mean dislike ranking include Oil Refinery, Livestock Feed Factory, Livestock odour (i.e. intensive pig/poultry production). Generic odours such as Sauerkraut and Cleaning agents have also similar dislike abilities to WWTP odours. Dravnieks et al., 1994 performed hedonic tone ranking of generic odours including Sauerkraut, Cleaning agents and Sewer odour and obtained a mean hedonic score of –0.60, –1.69 and –3.68, respectively. There is a clear trend in these studies whereby both mean ranking of dislike ability and hedonic scoring provide subjective ranking of odours and their respective ability to cause offensive/complaint. It would appear that when the hedonic tone of the odour reached a specific level, the odour hedonic tone decreases rapidly to small increases in odour threshold concentration (i.e. small increases in odour threshold concentrations will cause a large change in the perceived odour offensiveness). Such trends have been observed by Odour Monitoring Ireland in a laboratory-based environment. It has been suggested that when an odour reached an odour intensity level of 3 (distinct) and a mean hedonic score of –2 (unpleasant), an odour will become offensive and cause odour complaint. This scoring level can be assessed through the use of olfactometric techniques in a laboratory based environment whereby the odour concentration level corresponding to an odour intensity level of 3 and a hedonic tone of –2 can be determined. This methodology of analysis is very important in spot-checking odour abatement systems. By implementing hedonic tone assessment techniques on source odour samples, the odour threshold concentration responsible for causing on odour complaint following dynamic dilution can be determined. VDI Guidelines 3882 Part 2 – Determination of odour Hedonic tone specifies a methodology for such an assessment.

Commonly used odour annoyance criteria utilised in dispersion models:

An odour impact criterion defines the odour threshold concentration limit value above baseline in ambient air, which will result in an odour stimulus capable of causing an odour complaint. There are a number of interlinked factor, which causes a nearby receptor (i.e. resident) to complain. These include:

- Odour threshold concentration, odour intensity and hedonic tone-defined measurable parameters at odour source,
- Frequency of odour-how frequently the odour is present at the receptor location,
- Duration of odour-how long the odour persists at the receptor location,
- Physiological-previous experiences encountered by receptor, etc.

By assessing these combined interlinked factors, the ability for a facility to cause odour complaint can be determined. As odour is not measurable in ambient air due to issues in sampling techniques, limit of detections for olfactometers and the inability to monitor continuously, therefore dispersion models become useful tools in odour impact assessments and odour risk analysis. Dispersion modelling also allows for the assessment of proposed changes in processes within the WWTP without actually having to wait for the processes to be changed (i.e. predictive analysis)

5.6.2 Conclusions

A worst-case odour emission scenario was considered. It was concluded that:

- In accordance with odour impact criterion and in keeping with current recommended odour impact criterion in this country, no residents in the vicinity of the existing operations may perceive odour impact as a result of emissions from the facility.
- In the event that they do, proposed operational changes and the implementation of odour mitigation protocols within the facility will lead to a reduction in overall emissions of offensive odours and markedly reduce the odour impact area especially hedonically offensive odours. It is predicted that no residences will perceive odour impact following these upgrade works.
- Those management and mitigation strategies discussed throughout this document should be considered and implemented to ensure no odour impact and best international practice should be maintain in the operation of the WWTP in terms of odour mitigation.

Recommendations

1. Odour management, minimisation and mitigation procedures should be implemented in order to prevent any odour impact in the surrounding vicinity:

2. Maintain good housekeeping practices (i.e. keep yard area clean, etc.), closed-door management strategy. Maintain dead bird storage within enclosed containers that minimise surface emissions

3. Odour mitigation techniques as discussed should be implemented within the plant in the short term.

4. Those management and mitigation strategies should be considered and implemented to reduce the impact of this facility. An odour management plan should be implemented in the short term.

5. Develop a strategy in moving forward to reduce the overall odour emissions from process by design and installation of odour mitigation techniques.

<u>Control Measures to Minimise and Abate Odour on site</u>

Emissions from this site are currently minimised using the following recommendations;

• Litter management kept to a high standard.

• Adequate use of litter bedding material.

• Stocking density maintained at design level.

• Quality ventilation due to computerised/automated control.

• Quality house design with state of the art insulation standards.

• Minimisation of carcasses by keeping the flock health to the highest possible standard. As a result of this, mortality rates will be kept to a minimum. Any dead birds will be stored in covered leak proof containers awaiting collection by Wards Waste Collection services.

• The feed used on this unit has been formulated to the optimum crude protein levels thus minimising nitrogen excretion. This will keep ammonia emissions from the ventilation system and from manure transport to a minimum. The dust level in the feed is also maintained below 1% to ensure that dust emissions are minimised.

• Water and feed systems will be maintained in optimum condition and operation so as to minimise water and feed wastage. This will have a significant effect on keeping any possible odour emissions from this facility as low as possible.

Proposed Measures to further Minimise and Abate Odour on site

As a result of the comprehensive management and other practices currently carried out on site, coupled with the very remote location of the site there has not been a single complaint regarding odour emanating from this site. It is therefore considered that no additional measures are deemed to be required, at this time. It will be ensured by the applicant that all current, management practices are continued and improved upon where possible so as to attempt to minimise any potential odour emissions and also with a view to retaining the status quo.

5.7 Noise

5.7.1 Introduction

This component of the EIS deals with the actual and potential noise emission impacts from the current operation at Mr Andrew Keating's poultry farm.

In most cases where an environmental impact statement is required, Environmental noise studies are undertaken the main aims of which are to:

- As far as possible, establish the pre-existing noise levels in the environs of the facility
- Establish the current noise environment in the environs of the facility/site
- Project and assess the noise levels to be generated by the proposed development
- Specify appropriate ameliorative measures were deemed necessary

In this instance due to the fact that the site is remote, in operation for a number of years, has no previous noise complaints and that there will be no alteration to the facility itself, to the fans or ventilation units at the site as a result of the development it was deemed unnecessary to carry out such an assessment.

5.7.2 Acoustic Terminology

Sound is simply the pressure oscillations that reach our ears. These are characterised by their amplitude, measured in decibels (dB), and their frequency, measured in Hertz (Hz). Noise is unwanted or undesirable sound, it does not accumulate in the environment and is normally localised. Environmental noise is normally assessed in terms of A-weighted decibels, dB(A), when the 'A weighted' filter in the measuring device elicits a response which provides a good correlation with the human ear.

The criteria for environmental noise control are of annoyance or nuisance rather than damage. In general, a noise level is liable to provoke a complaint whenever its level exceeds by a certain margin the pre-existing noise level or when it attains an absolute level.

A change in noise level of 3 dB(A) is 'barely perceptible', while an increase in noise level of 10 dB(A) is perceived as a twofold increase in loudness. A noise level in excess of 85 dB(A) gives a significant risk of hearing damage.

5.7.3 The Receiving Environment

Noise is not considered a significant environmental emission from this facility. The site is located in a very rural area and there are no sensitive noise receptors evident within 300m or more. There is a residence located 125m West of the Site boundary. There are residences located 110m, 130m and 220 North East of the site boundary and there is a house located approximately 121m South East of the site boundary and a farmyard located 350m South of the site. Background noise from the minor road network ensures that there is no noise carryover to the nearby houses.

There have been no complaints of noise emissions for this facility to date. The activities currently on site do not generate noise levels that could be detected at the site boundary, similar to most poultry farms in the country. This facility will not result in audible noise outside of acceptable limits at or beyond the site boundary. The proactive maintenance regime on fans and motors ensures that no excessive noise is experienced at the site.

5.7.4 Impacts of Development

5.7.4.1 Actual impact

The actual impact of the development is minimal for the site. No noise audible beyond the boundary of the site.

5.7.4.2 Potential impact

- The potential or proposed impact of the site is anticipated to be minimal

5.7.5 Impacts of Development

There will be no construction phase noise as there will be no construction as a result of this proposed development.

The operational noise sources i.e. fans and motors will remain the same for the proposed development hence no noise impact is predicted.

5.8 Material Assets and Cultural Heritage

5.8.1 Archaeological Assessment

A desktop report on a basic archaeological assessment of the site was carried out. The importance weighting with regard to the archaeological significance of the proposed development is considered low as there are No construction activities or excavation works proposed as part of the proposed development. It was however noted that the site is surrounded by a rich culture of ring forts and crannogs which are recorded by the National Monuments Service as archaeologically significant.

The findings of this assessment have been that the development site is proximate to items of historical interest which have been duly recorded but not site on any archaeological remains. The site was reduced prior to the building of the present structures and therefore there is no archaeological impact exerted by the existing development.

5.8.2 Agriculture

The site is currently located in an existing agricultural hinterland surrounded on all sides by agricultural grazing fields. The development being agriculturally derived does not pose any cultural impacts on the area. In actual fact the location of the facility in its present position is providing a service to the farmers in the surrounding area and would be regarded as a beneficial development.

There are no plans to extend the current boundary outside the existing site in the development and therefore there will be no conversion of agricultural to commercial lands.

Therefore, no negative impacts have been identified in the current operation on agriculture rather positive environmental and social impacts.

5.8.3 Property

The current development at Mr Andrew Keating's poultry farm impacts positively and will continue to impact positively on the existing site property and also the development serves to have a positive impact on the surrounding properties also.

5.8.4 Social Impact

The material social impact will be very positive in that it will secure the permanent post at the site. It will ensure a sustained requirement for service jobs at the site of which there may be up to 10 different services servicing the site. Finally the proposed development will result in a sustained volume of produce for supply to the main

processing facility of Western Brand located in Ballyhaunis, Co. Mayo thus contributing to the sustainability of the jobs at that facility. Overall the social impact of the proposed development is seen as greatly positive.

5.9 Landscape and Visual Impact

5.9.1 Introduction

Due to the fact that the existing site as built has full planning permission and the fact that the development does not seek to physically alter any structures on site it is concluded that there is no requirement for full Impact assessment on the site in relation to visual impact. Traynor Environmental Ltd did however assess the existing impact of the site visually from areas out of the site from where it can be seen:

5.9.2 Results

The visual impact if the development is minimal with the exception being that the site can be seen from the roadway to the North West of the site. It is noted that no complaints have been made regarding visual intrusion and no objections were made in this regard in the previous planning permissions.

The development will not impede the visual status of the site in any way as no construction or physical additions will be made to the site or site structures in this current development.

5.9.3 Recommendations

No specific recommendations are directed towards the facility.

5.10 Traffic

5.10.1 Introduction

In preparing this report and in line with Company guidelines for the production of an EIS, Traynor Environmental Ltd has made reference to:

- The Monaghan County Development Plan 2013 - 2019
- The NRA 'Traffic and Transport Assessment Guidelines'
- The NRA 'Future Traffic Forecasts 2002 to 2040'
- An Forás Forbartha Road Geometric Guidelines RT 180
- Department for Transport UK "Manual for Streets".
- The NDA's "Buildings for Everyone"

The objective of this review is to assess the impact the proposed development will have on the existing road network, also taking into account any road network improvements proposed in the area. This report will assess the expected volume of traffic that will be generated by the existing and proposed development and assess the impact that this traffic will have on the operational capacity of the road network in the vicinity of the development.

5.10.2 Site Location

The poultry facility is located approximately 3.3 km's to the South East of Newbliss Co Monaghan on a narrow stretch of local roadway (L63101). The site is located below road level on the L63101 approximately 0.4 kilometres off the R189 Regional Road.

5.10.3 Existing and Proposed Traffic Conditions

5.10.3.1 Traffic Survey

It was determined that due to the current very low traffic volumes existing and proposed at the site that a traffic survey of the R189 and at the site entrance as accessed from the L63101 would not be required at this time.

5.10.3.2 Existing Road Network

The poultry facility is located approximately 3.3 km's to the South East of Newbliss Co Monaghan on a narrow stretch of local roadway (L63101). The site is located below road level on the L63101 approximately 0.4 kilometres off the R189 Regional Road. The L63101 local road connects with the R189 regional road on the third turn-off on the left hand side heading South from Newbliss in the direction of the town of Cootehill.

The R189 Regional road is most relatively a road of good single carriageway which leads into Newbliss, through the village of Three Mile House and eventually connects with the N54 just before Monaghan.

The L63101 is a narrow local road which connects with the R189 Regional Road approximately 2.9 kilometres South of Newbliss. Traffic would consist mainly of car journeys coming to and from nearby residences and agricultural traffic making journeys to and from nearby fields and farms aswell as traffic generated by Mr Andrew Keating's poultry operation.

5.10.3.3 Proposed Network Improvements and Committed Development

There are no major infrastructural projects in the local area, that would effect the development.

5.10.4 Trip Distribution and Generation

5.10.4.1 Trip Generation

The main traffic generated to the site is from the following site operations:

Feed deliveries – Based on 50,000 birds there would be a requirement for 325 tonnes of feed on site. This represents 13 deliveries to site annually.

Gas Deliveries –There are 5 gas deliveries in the year (1 per batch of birds). There will be No increase in traffic due to the fact that there will be no changes made to the existing operation of Mr Andrew Keating's poultry farm therefore the space heating requirement will remain the same.

Oil Deliveries – There are 5 oil deliveries in the year. There will be no increase in traffic as no additional oil deliveries are anticipated.

Bedding deliveries – Bedding is delivered to the site 5 times per annum. There will be no increase in traffic as no additional bedding deliveries are anticipated.

Waste Removal – there are 3 loads of waste chicken litter removed per batch of birds and there are 5 batches per annum. Therefore there are 15 loads of litter removed per annum. There will be no increase in traffic as no additional waste removal is anticipated.

Washings Soiled water – There are 3 loads of soiled water from washing activities per batch of birds and there are 5 batches per annum. Therefore there are 15 loads of washings soiled water removed annually. There will be no increase in traffic as no additional waste removal is anticipated.

Bird Collections: There are 2 houses with 5 batches per house so therefore there are 10 bird collections per annum. There will be No increase in traffic as No additional collections are anticipated.

Site operation	Traffic movements at 50000 birds
Feed	13
Gas	5
Oil	5
Bedding (shaving)	5
Waste litter	15
Washings	15
Bird deliveries	5
Bird Collections	5
Other services / maintenance / visitors / inspections	10
Total	**78**

5.10.4.2 Trip Distribution

For the purposes of this report, it is not foreseen that there will be any increase in traffic from the current levels generated by the development as there will be no changes made to the current operations taking place on Mr Andrew Keatings poultry farm.

5.10.5 Results

The results suggest that there will be no increase from 80 trips to or from the site annually. This represents 80 in 365 days which is 0.22 trips per day. There is currently no significant impact on traffic in the vicinity of the site

due to the operations of Mr Andrew Keatings poultry farm and as it is not predicted that traffic generated by the poultry farm will increase in future this effect will remain the same.

5.10.6 Road Safety

The NRA's DMRB TD 41/95 requirements were used as the standards against which site visibility was assessed. This document requires that visibility splays of 2.4 x 160m be provided for a road with a design speed of 85km/h. The site access is off the local road with a speed limit of 50km/hr or below that. (unmarked and unlimited)

Visibility splays of 2.4 x 160m are currently available at each side of the site access junctions, satisfying the visibility requirement as set out in the NRA's DMRB TD 41/95. Some trimming back of hedgerows may be required but no structural works. The general width of the country road leading to the facility is 4.4m. The UK Department for Transport's Manual for Streets states that two HGV's can pass each other on a 5.5m wide carriageway with a tolerance of 0.5 m and a speed of 30 mph (48 km/h).

There are no road markings at the site.

5.10.6.1 Public Transport

Due to the rural location and nature of the proposed development, it is not expected that the development will impact on public transport.

5.10.6.2 Pedestrians

It is not anticipated that pedestrians will be impacted by this development. No footpath provision is made in the development.

5.10.6.3 Cyclists

It is not anticipated that cyclists will be impacted by this development. No cycling parking provision is made in the development.

5.10.7 Conclusions and recommendations

5.10.7.1 Conclusions

The conclusions to this report are as follows:

- No impact will occur on traffic from the proposed development.
- Site Road safety is consistent with National requirements. 2.4 x 160m visibility splays are available to both sides of the site access junction, satisfying requirements as set out in the NRA's DMRB TD 41/95. This need not be the case for the local access road and they are to standard for the access from L63101.

5.10.7.2 Recommendations

The report recommends that:

Footpaths are provided along the front of the buildings within the development along with dished kerbing with tactile paving at entry points to facilitate mobility-impaired pedestrians.

It is recommended that the current site access route is sufficient for all HGV and other deliveries and trades access to the site.

5.11 Solid Waste Infrastructure

5.11.1 Introduction

As stated throughout this document the facility is an operational poultry farm and thus the wastes streams from the facility are typical of the industry. The impacts of said operations are also analysed within this document.

5.11.2 Construction Phase Waste Arising

There will be no construction wastes arising from the development as there is no construction proposed for the proposed development.

5.11.3 Operational Phase Solid Waste Arisings

The following solid wastes arise regularly from the daily operations of the facility as it currently exists:

5.11.4 Waste Destinations

5.11.4.1 Organic Waste

Poultry manure generated at this facility is sent for land spreading. All manures generated will be managed in accordance with the regulations set out in S.I 610 of 2010 and all relevant information will be maintained on site for inspection at all reasonable times.

Soiled water is taken from the site by vacuum tanker and land spread on lands nominated locally by the operator. The management or this operation in carried out in strict accordance with the requirements of SI 610 of 2012.

5.11.4.2 Disposal routes for other wastes

All other waste materials from the facility goes to registered waste handlers with the following outlets being used:

Dead Birds	College Proteins Rendering plant
Fluorescent tubes	to local waste recovery facility
Waste Oils	ENVA (Atlas Oils)

Cardboard / Packaging Wastes	to local recycling facility
General Canteen / Household Wastes	to local recycling facility
Veterinary waste	returned to supplier.

5.11.5 Environmental Impacts Associated with the handling of Solid Waste at Andrew Keating's poultry Farm

5.11.5.1 Land Spreading of Organic Wastes (Soiled Water)

The following are the main potential impacts associated with the land spreading of

organic wastes:

- There is potential of spillage of material in transit where vehicles are inadequately sealed or maintained
- The loading and unloading of the vehicles can potentially lead to spillages of material
- There is a risk that the receptor tanks for the material may be inadequate to hold the material
- In the spreading of the material there is a risk that the material will be over applied leading to potential run-off to local water courses
- In the spreading of the material there is the risk that the material will be spread proximate to sensitive local amenity causing nuisance.

Code of Good Spreading Practice Guidelines SI 610 2010

Spreading shall not take place:
• On Wet or waterlogged ground. • On frozen or snow covered ground. • On exposed bedrock • Where surface gradients are excessive (preferable less than 18% (1.5) • On fields that display cracks over pipe or mole drainage systems. • During November to February inclusive. • Outside daylight hours. • Between 15th October and 31st January in the Meath Area
Loadings:
• Regardless of the dilution factor, the maximum hydraulic loadings per single application shall not exceed 25 m^3 per hectare on shallow limestone soils and in no case shall exceed 50 m3 per hectare. • Application of organic waste shall not be made on soils with a Morgan's P test in excess of 15 mg P/litre sampled to a depth of 10 cm.

Organic Waste application shall be in accordance with the following guidelines:
• Land spreading on lands with extreme groundwater vulnerability ratings would be considered not generally acceptable. • Application should not be made such that the rate of application of nitrogen from organic wastes does not exceed 250 kg N/ha per annum. • No application when the risk of causing odour nuisance to the public is greatest e.g. Sundays of public holidays. • No application during meteorological conditions, which increase the risk of odour nuisance. • No application where significant rain is forecast within 48 hours.

5.11.5.2 Handling of other generated wastes

The main environmental risks associated with the handling of the other listed wastes from the facility are in the storage of the wastes and in the transportation of same. Cognisance must be given to groundwater and surface water protection in washing activities on site and adequate management of collection tanks must be maintained.

5.11.6 Mitigation measures for the handling of Waste Materials at the Poultry Farm of Mr Andrew Keating.

5.11.6.1 Organic Waste for Land Spreading

- It is imperative that adequate storage is provided on-site for the storage and containment of organic waste.
- High-level alarms should be fitted on all on-site storage tanks to avoid overflow and possible contamination of proximate surface water locations.
- Adequate transfer zones, filling points should be provided for the clean transfer of materials to the transfer vehicles.
- Adequate covering should be provided where waste is stored to prevent scavenging by vermin.
- Fully trained operators should only be permitted to affect the transfer of waste to the transfer vehicles.
- All vehicles utilized for the purpose of transfer of waste should be fit for use and not leaking.
- All spread lands should be assessed by suitably qualified professionals and Nutrient calculations assigned in accordance with relevant National legislative requirements.
- All land spreading should be carried out in accordance with relevant National Legislative requirements and with the codes of good spreading practice for organic waste.
- All land spreading should be carried out by fully trained operatives and training should be focused on the code of good spreading practice and the environmental requirements of the Company's Environmental Management Plan.
- A register of all wastes leaving the site should be kept incorporating as a minimum the time, date, type of waste, Carrier of the waste, vehicle registration and proposed destination of the waste.

5.11.6.2 Other wastes generated at the facility

- It is imperative that adequate storage is provided on-site for the storage and containment of all waste.
- High-level alarms should be fitted on all on-site storage tanks where possible to avoid overflow and possible contamination of proximate surface water locations.
- Adequate transfer zones, filling points should be provided for the clean transfer of materials to the transfer vehicles.
- Adequate covering should be provided where waste is stored to prevent scavenging by vermin.
- Only registered waste contractors should be utilized for the collection of waste
- All external operatives should be inducted into plant operating procedures and should be familiar with the general workings of the site to avoid accidental spillages
- A register of all wastes leaving the site should be kept incorporating as a minimum the time, date, type of waste, Carrier of the waste, vehicle registration and proposed destination of the waste.

5.12 Water Infrastructure

5.12.1 Water Infrastructure

Mr Andrew Keating's poultry farm obtains its water supply from the public water supply. There is one onsite well which is no longer in use.

5.12.2 Environmental Impacts Associated with the provision of on-site water

As stated above the water for the site is provided by the public water supply and distributed to the farm houses. There is an on-site private well which is no longer in use.

In line with this the following mitigation/ prevention is suggested: All chemicals must be stored in bunded areas. All storage and holding tanks and underground piping must be tested to ensure no leaks are occurring.

All tank structures external to the treatment plant, namely the yard storage tanks must be fitted with high level alarms to indicate that structures require emptying

6.0 Conclusions:

A study of all of the environmental impacts of the operations of this site has been conducted and the result is that whilst there will be impacts on the environment from the operations on site they will be minimal and not significant. This is primarily manifested due to the fact that no additional construction will take place on the site and secondly by virtue of the fact that the houses are built adequately to accommodate the target numbers.

ANDREW KEATING

APPENDIX - A – DRAWINGS