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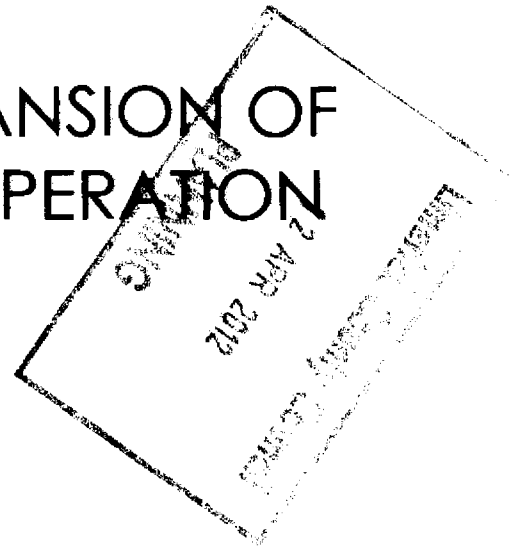
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## ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED EXPANSION OF A POULTRY GROWING OPERATION

**April 2012**

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**PATRICK O'CONNOR**

**ENVIRONMENTAL IMPACT STATEMENT**

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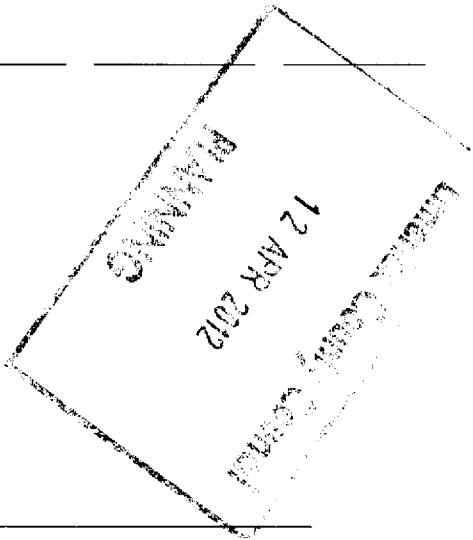
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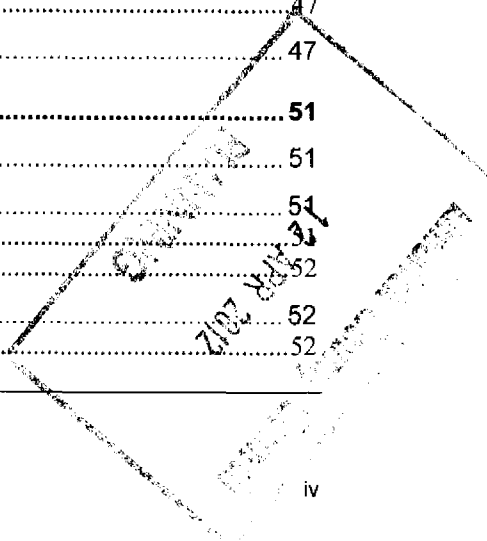
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# 1 LEGISLATIVE REQUIREMENTS

## 1.1 INTRODUCTION

This chapter broadly describes the legislation under which Patrick O'Connor proposes to expand the existing poultry operation is presented. The planned development will require submission of a Planning Application to Limerick County Council, together with an Environmental Impact Statement.

At a conference in November 2010 Dermot Ryan, Deputy Chief Inspector at the Department of Agriculture, Fisheries and Food drew attention to the Department's recently launched Food Harvest 2020 report and the particular provisions of this initiative that "will be significant to the development of the poultry and egg sector over the coming decade." He highlighted the importance of research into "new technologies aimed at improving production efficiencies as well as further development of innovative and value-added output as crucial to competitiveness and future growth."

Speaking at the event Aidan Cotter, Chief Executive, Bord Bia commented "The poultry and egg sector remains a valuable and integral part of the Irish agricultural economy, with output at farm level estimated at €150 million in 2009 (€120 million from poultry meat and €30 million from eggs). The sector is a significant employer in rural Ireland with over 6,000 people employed in poultry processing and egg packing and up to a further 850 farms involved in the production of poultry and eggs."

Ireland has one of the highest levels of poultry meat consumption within the EU, with in excess of 30kg per capita consumed and this volume is increasing with annual chicken sales up by 5% over the past year. However, one of the greatest issues for the poultry meat sector is the level of imports which continue to exert downward pressure on the market and the indigenous Irish poultry industry.

The increase in the capacity at Patrick O'Connor poultry farmer will help meet the growth in the sector description of the development

## 1.2 ENVIRONMENTAL IMPACT ASSESSMENT AND PLANNING LEGISLATION

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

The developer following discussion with the planning authority is required to have an EIS carried out as part of the planning application under the following regulations:

- 1) EC (Environmental Impact Assessment) Regulations 1989: Article 24. Schedule. Part II 1. (d) " Poultry rearing installations where the capacity would exceed 100,000 units, where units have the following equivalents: 1 broiler = 1 unit, 1 layer, turkey or other fowl =2 units".
- 2) Planning and Development Regulations 2001 (S.I. No. 600 of 2001).
  - These regulations state that even if the development is under the relevant EIA threshold the planning authority is required under article 103 to request an EIS where it considers that the proposed development is likely to have significant environmental effects.
  - Section 17: An EIS is required for "installations for the intensive rearing of poultry or pigs with more than: (a) 85,000 places for broilers 60,000 places for hens).

The documents *Guidelines on the information to be contained in Environmental Impact Statements*, 2002 and *Advice Notes on Current Practice (in the Preparation of Environmental Impact Statements)*,



2003 as prepared by the EPA, were followed in the preparation of this EIS. The guidelines state that in preparing an EIS, the Developer will carry out an analysis of the likely effects of the project (positive or negative) on the environment. The Environmental Impact Assessment procedure commences at the project design stage when the scope of the study is determined. Studies are then carried out to investigate, in detail, any potential environmental impacts. Where significant adverse impacts are identified, measures are recommended to mitigate or avoid the impact of the proposed Development.

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

### 1.3 SCOPE OF THE ENVIRONMENTAL IMPACT STATEMENT

Scoping is an essential part of the preparation of any planning application 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 Environmental Impact Statement. 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 potential impact of the expansion to the poultry growing operation on the local communities.

#### Natural Environment

The site of the existing poultry operation and the proposed extension is located in an area of poor ecological value. The site is not located or bordering any sensitive ecological areas including Natural Heritage Areas (NHA) Special Area of Conservation (SAC) or Special Protection Area (SPA).

The impacts on the land and plant contained within must be assessed with care to ensure that all impacts are clearly identified and where possible removed, reduced or minimised to a satisfactory level.

#### Material Assets

This involves aspects impacted by land take for the proposed scheme and available resources such as soils, utilities etc. The development will be constructed primarily on 'greenfield' site in land currently owned by Patrick O'Connor.

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## 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.

### 1.3.1 Scenarios Investigated

A number of different scenarios have been examined when determining likely significant impacts.

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

## 1.4 IDENTIFICATION OF LIKELY SIGNIFICANT IMPACTS

Schedule 6 of the Planning and Development Regulations requires that the projects requiring an EIS describes the likely, direct and indirect impacts of a proposed scheme. The Environmental Impact Statement will follow the same basis. The EPA (Guidelines on the Information to be Contained in Environmental Impact Statements, 2002) defines an impact as “the degree of change in an environment resulting from a development” and continues to elaborate on impacts in terms of quality (positive, neutral or negative), significance (imperceptible, slight, moderate, significant or profound), duration (temporary, permanent, short-term, medium-term or long-term) and type (cumulative, indeterminable, irreversible, residual, synergistic or ‘worst case’).

The following factors have been considered for this Environmental Impact Statement when determining the significance of the impacts, both positive and negative, of the proposed scheme on the various aspects of the receiving environment:

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

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

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

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

| Degree of Impact/Significance Level |                                 | Definition of Impacts  |
|-------------------------------------|---------------------------------|--|
| Profound                            | Significant Impact              | An impact, which obliterates sensitive characteristics.  |
| Major                               |                                 | An impact, which by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.  |
| Moderate                            |                                 | An impact that alters the character of the environment in a manner that is consistent with existing and emerging trends.   |
| Slight                              |                                 | An impact, which causes noticeable changes in the character of the environment without affecting its sensitivities.  |
| Not significant                     | Neutral or Imperceptible Impact | An impact which does not change the quality of the environment, is capable of being measured but without noticeable consequences and causes changes in the character of the environment which are not significant or profound. |

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Construction works are expected to occur over duration of approximately one month. The extra traffic and noise generated will be only temporary. Complaints are not expected from those living in and travelling through the area.

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### 3 ALTERNATIVES

#### 3.1 EXAMINATION OF POSSIBLE ALTERNATIVES

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

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

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

#### 3.2 Alternative Sites

A review of Patrick O'Connor's owned property reveals that this is best option as alternative site would create duplication of the site infrastructure for the construction of one poultry house.

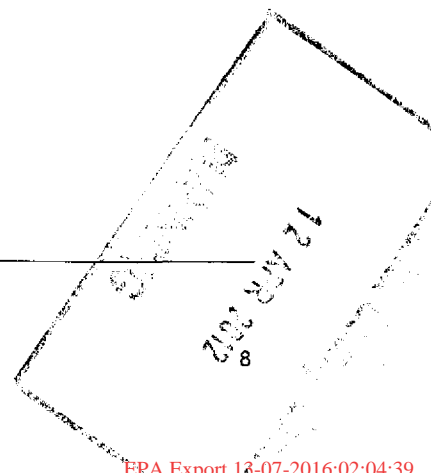
Acquiring property further away from the existing poultry operation has been ruled out as:

- Land would be expensive to acquire
- Alternative land under the ownership of the O'Connor family has been refused planning permission
- Construction costs would be more expensive as the proposed expansion of the poultry growing operation would be connected into the existing infrastructure, thus avoiding duplicate costs of constructing a new feeding, water and heating systems, electrical infrastructure and access.
- Operation costs would be more expensive as addition feed silos and pumping distances would be greater and electricity infrastructure would have to come from existing National Grid as opposed to existing on site electrical infrastructure.
- The site is an IPPC Licensed site and the proposal in another site would also require an IPPC License and division of the operation is not in the best option for environmental control.

#### 3.3 Alternative Layouts

The layout of the site was considered for the proposed additional poultry house to minimise the operational cost of the development and consider animal welfare. However, the footprint of the additional two poultry houses is subject to a number of physical constraints.

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



## 4 INTERACTIONS AND INTER-RELATIONSHIPS

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

**Table 4.1** shows a matrix of significant interactions likely to occur from the proposed development. The boxes marked with a dot in **Table 4.1** indicate that a potential relationship exists between the two environmental factors. The level of interaction between the various topics will greatly vary but the table allows the interactions to be recognised and further developed where necessary. The table is constructed on the basis that an environmental subject has a potential inter-relationship both during the construction and operational phases of the proposed scheme. Summary details on the interactions are provided in **Table 4.2**.

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

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**Table 4.1: Interaction/Inter-Relationship Matrix - Potential Significant Interaction in the Receiving Environment**

|                 | HUMAN BEINGS | AIR | NOISE | LANDSCAPE | FLORA AND FAUNA | WATER | SOILS | CLIMATE | MATERIAL ASSETS |
|-----------------|--------------|-----|-------|-----------|-----------------|-------|-------|---------|-----------------|
| HUMAN BEINGS    |              |     |       |           |                 |       |       |         |                 |
| AIR             |              |     |       |           |                 |       |       |         |                 |
| NOISE           |              |     |       |           |                 |       |       |         |                 |
| LANDSCAPE       |              |     |       |           |                 |       |       |         |                 |
| FLORA AND FAUNA |              |     |       |           |                 |       |       |         |                 |
| WATER           |              |     |       |           |                 |       |       |         |                 |
| SOILS           |              |     |       |           |                 |       |       |         |                 |
| CLIMATE         |              |     |       |           |                 |       |       |         |                 |
| MATERIAL ASSETS |              |     |       |           |                 |       |       |         |                 |

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The following are the interactions anticipated from the proposed scheme.

**Table 4.2.: Summary of Potential Interactions / Inter-relationships**

| Subject         | Interaction with | Interactions / Inter-relationships  |
|-----------------|------------------|---|
| Air             | Human Beings     | Air quality is not a concern both at the local community level and on a broader national/global scale. In terms of the proposed poultry housing, dust (both during the construction phase and operation phase and its impact on the communities and residents adjacent to the poultry housing will be the main issue. |
|                 | Flora and Fauna  | Vegetation can act as a purifier for air in absorbing CO <sub>2</sub> and giving out oxygen. Dust could affect fauna and flora during construction phase.   |
|                 | Water            | No Interactions / Inter-relationships   |
|                 | Soils            | Dust from exposed soils during construction could cause deterioration of air quality in the immediate vicinity of the development, notably dry weather periods.   |
|                 | Climate          | Local heating of air in the poultry houses could cause microclimate change in those areas.  |
|                 | Material Assets  | No Interactions / Inter-relationships   |
|                 |                  |   |
| Noise           | Human Beings     | Sensitive receptors located close to the proposed extension may experience some increase in noise particularly during the construction stage.   |
|                 | Flora and Fauna  | Construction proposals could result in significant noise disturbance which may impact on the birdlife currently using the area.   |
|                 | Material Assets  | No Interactions / Inter-relationships   |
|                 |                  |   |
| Landscape       | Human Beings     | The proposed development will have a minor actual and perceived landscape appearance in the area and directly impact on the local community and adjacent residences.  |
|                 | Flora & Fauna    | A small loss of hedgerow will occur which are very important wildlife corridors for animals. Improvement of the remaining hedgerow will be conducted post development.  |
|                 | Water            | No Interactions / Inter-relationships   |
|                 | Soils            | Movement of significant quantities of soil from one area to another can affect the appearance of the landscape. This will be necessary as part of the construction when material is removed from the construction zone.   |
|                 | Material Assets  | No interactions / Inter-relationships   |
| Flora and Fauna | Human Beings     | There will be minor impact on the fauna and flora of the area as they suffer habitat loss and dislocation due to the proposed scheme.   |
|                 | Water            | During construction there is a minor risk of disturbance of drainage channels. This needs special precautions to avoid disturbance of sediments with consequent effects on fauna.   |
|                 | Soils            | Stabilisation methods for soft soil areas could alter the pH balance with consequent change in flora cover and species of fauna supported.  |
|                 | Climate          | No Interactions / Inter-relationships   |
|                 | Material Assets  | Land take will cause some local loss of range area for terrestrial fauna  |
|                 |                  |   |



| Subject                | Interaction with | Interactions / Inter-relationships  |
|------------------------|------------------|---|
| <b>Water</b>           | Human Beings     | No Interactions / Inter-relationships   |
|                        | Soils            | Rainfall runoff waters could cause deterioration of water quality of streams.                             |
|                        | Material Assets  | No Interactions / Inter-relationships   |
| <b>Soils</b>           | Human Beings     | Dust from exposed soils during the construction period can cause dust nuisance if not properly mitigated. |
|                        | Material Assets  | Extraction, movement and placing of soils will have an energy input requirement.                          |
| <b>Climate</b>         | Human Beings     | No Interactions / Inter-relationships   |
|                        | Material Assets  | No Interactions / Inter-relationships   |
| <b>Material Assets</b> | Human Beings     | Current land-use will be permanently altered including the loss of ecological habitat and farmland.       |

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## PART II – ENVIRONMENTAL IMPACTS

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

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## SECTION A – HUMAN ENVIRONMENT

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

These effects have been grouped into:

- Community Impact- the direct or indirect impact of the scheme on the population living or working in the general vicinity of the proposed poultry rearing operation at Rathcahill West, Templeglantine, Newcastle West, Co. Limerick.
- Air Quality Impacts – the impact of emissions generated by the proposed poultry rearing operation at Rathcahill West, Templeglantine, Newcastle West, Co. Limerick.
- Noise and Vibration Impacts - the impact of noise and vibration generated by the scheme on noise and vibration levels in the general vicinity.
- Landscape and Visual Impacts – the impact of the scheme on the aesthetic aspect of the landscape.

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

## 5 AIR QUALITY AND CLIMATE

### 5.1 INTRODUCTION

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

### 5.2 METHODOLOGY

#### 5.2.1 Baseline Monitoring

##### 5.2.1.1 Total Suspended Particles (Dust)

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

As there are no set limits for dust deposition in Ireland, the TA Luft guidelines are referenced. TA Luft is the German Government technical instructions on air quality and referenced by the Irish EPA. Dust deposition monitoring using Bergerhoff-Gauges would be the recommended standard method meeting TA-Luft (1986) requirements. No monitoring was conducted at Patrick O'Connor's poultry growing operation as it would be considered that there is a minor risk of deposited dust level exceeding the TA Luft levels.

##### 5.2.1.2 Odours

Attached is an odour management plan for Mr O'Connor's Poultry operation in summary Mr O'Connor is committed to operating the existing facility to best practice. The proposed poultry house will have the best available water and feeding systems and following construction of this house Mr O'Connor plans to modernise the existing poultry houses with the same water and feeding systems. The key factors for odour management plan with a poultry operation are:

- Avoiding the build-up of slurry or manure on concrete around buildings;
- Removal and disposal of dead animals;
- Drain maintenance;
- Bedding cleanliness;
- Management of drinking systems, with particular emphasis on frequently adjusting nipple and drip cups to bird eye level to avoid spillage and wet litter;
- Stocking density;
- Litter moisture content;
- Insulation of the buildings and the long term maintenance of that insulation;
- Ventilation and heating system;
- Type of heating;
- Composition of the feed, particularly its oil and fat content and its protein content.

Mr O'Connor has never received a complaint directly in relation to his poultry operation from a local resident, Local Authority, EPA, HSE, etc. In previous planning application there have been complaints to the planning authority in relation to odours.

As part of the Odour management plan Mr O'Connor is committed to doing whatever is necessary to avoid complaints and if necessary is committed to the installation of odour abatement technology such as bio-scrubber or bio-filters. Mr O'Connor Poultry farm has a good record with Bord Bia audits and other audits such as Entegra (UK) audit.

Although odour generated in the operation may be more detectable at certain times, as partly influenced by prevailing weather conditions, the townland and surrounding townlands are well accustomed to occasional odour from this type of operation. This in mind however, odour levels generated are not expected to cause a significant nuisance in the surrounding area, as the operation will be management to the best possible level. Attached as part of the planning application is an odour management plan covering all aspects of the current and proposed expanded operation.

### 5.3 DESCRIPTION OF BASELINE AIR QUALITY

#### 5.3.1 Site Location

The location of the proposed development at Patrick O'Connor's poultry growing operations is at Rathcahill West, Templeglantine, Newcastle West, Co. Limerick. The site is located 9.0 km to the south west of Newcastle West, Co Limerick, approximately 46km southwest of Limerick City. The village of templeglantine is located to the northeast, approximately 1 km from the proposed development. The townland of Rathcahill West is situated south of Ballymurragh west, to the north the townland of Templeglantine West. The site is west of Lissurland and Glenmore West and to the east is Meenyline south.

#### 5.3.2 Existing Sources of Air Emissions

This facility with its existing poultry house has an existing impact to air quality as a result of emissions from combustion of LPG to heat the houses. The town of Newcastle West is located approximately 9.0 km northeast of the proposed site Patrick O'Connor's poultry operation. The main source of air pollution would arise from domestic and commercial fuel combustion. Emissions from oil combustion include mainly carbon monoxide, nitrogen oxides, sulphur dioxide and particulates as well as greenhouse gases.

### 5.4 IMPACTS

#### 5.4.1 Dust

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

#### 5.4.2 Odour

Routinely the poultry houses are cleaned out between batches approximately every seven weeks, and the cleared out litter and manure is taken away by a licensed contractor in adequately covered vehicles. Wash water generated from the cleaning of the houses will be stored in an underground tank at the end of each house, which would be adequately covered and certified by an engineer. Additionally litter generated in the houses is cleaned out and removed between batches resulting in levels of litter in wash water are negligible.

## 5.5 MITIGATION MEASURES

### 5.5.1 Dust

During the operational and construction phase of the poultry growing facility all efforts will be made to ensure no dusting occurs and a wheel wash facility will be put in place. Top soil will be removed off-site and stored appropriately if there is an excess following construction.

### 5.5.2 Odour

The Odour Management plan is Mr O'Connor statement of intent on how odours will be managed from the proposed and existing site.

The following measures will ensure little or no impact from odour on the surrounding environment: Good practice in terms of:

- Poultry house temperature control
- Carcass storage and removal from site
- Thorough cleaning out of the poultry house between batches
- Regular yard cleaning
- Strict adherence to good land spreading practice

No complaints of odour or dust have been received in relation to the existing poultry houses directly to Mr O'Connor but there have been complaints to the planning authority since the on another planning application owned by the O'Connor family. Therefore the commissioning of an additional poultry house is not expected to cause a nuisance in the surrounding locality.

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

## 5.6 CONSTRUCTION IMPACTS AND MITIGATION

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

### 5.6.1 Impacts

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

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

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

### 5.6.2 Mitigation

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

- Hard surface roads shall be swept to remove mud and aggregate materials from their surface.
- Any un-surfaced roads shall be restricted to essential site traffic only.