

- All vehicles exiting the site shall make use of a wheel washing facility, prior to entering onto public roads, to ensure mud and other wastes are not tracked onto public roads. This water will be collected into one of the existing wash water tanks
- Public roads outside the site shall be regularly inspected for cleanliness, and cleaned as necessary.
- Material handling systems and site stockpiling of materials shall be designed and laid out to minimise exposure to wind.
- Diesel engines of plant machinery and trucks shall be properly maintained so that they do not discharge excessive quantities of visible smoke likely to result in a local nuisance.

## 5.7 MONITORING

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

Routine odour surveys will be completed by an appointed person following the EPA Air Guidance on Odour Assessment (AG5) will be initiated and these reports will be retained on-site.

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

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## 6 NOISE

### 6.1 INTRODUCTION

Any sound, which can cause nuisance or a deterioration of amenities or quality of life, is examined in this chapter. Noise is a feature of most structural developments particularly during the construction phase. This will be the case during the construction of the proposed expansion of the poultry operation. Noise on a daily basis will result from regular operation of checking the stock, water and feed systems and deliveries.

An appraisal of the potential impacts from noise generated by the proposed expansion to the poultry growing operation on the surrounding environment was carried out by Montgomery EHS. The study identifies, describes and assesses the impact of the proposed extension in terms of noise. The assessment focuses particularly on noise impacts on residential locations (sensitive receptors) in the vicinity of the proposed development.

### 6.2 METHODOLOGY

Baseline noise information for this study was collected through a noise survey conducted in accordance with ISO 1996 'Acoustics: Description and Measurement of Environmental Noise'. Noise levels during the operational phase of the development were predicted using ISO 9613 'Acoustics: Attenuation of Sound during Propagation Outdoors'. Operating noise limits have been set using the Integrated Pollution Prevention & Control Licence conditions.

The noise survey results are presented in terms of the following three parameters:

- LAeq is the equivalent continuous sound level. It is a type of average and is used to describe a fluctuating noise in terms of a single noise level over the sample period.
- LA10 is the sound level that is exceeded for 10% of the sample period. It is typically used as a descriptor for traffic noise.
- LA90 is the sound level that is exceeded for 90% of the sample period. It is typically used as a descriptor for background noise.

The "A" suffix denotes the fact that the sound levels have been "A-weighted" in order to account for the non-linear nature of human hearing. All sound levels in this report are expressed in terms of decibels (dB) relative to  $2 \times 10^{-5}$  Pa.

#### 6.2.1 Baseline Noise Survey

A baseline noise survey was conducted as part of this noise assessment at locations adjacent to the proposed extension and its nearest noise sensitive locations. The survey was carried out in December 2011 and measurements were made over intervals of 15 minutes during the day. Noise measurements were made at the locations described in **Table 6.1**. These locations are also shown in **Figure 13**.

**Table 6.1: Description of Noise Monitoring Locations during Baseline Survey**

Map Reference	
1	At poultry farm entrance
2	South of farm entrance
3	North of farm entrance
4	West of farm entrance.

## 6.2.2 Noise Criteria

Typical conditions for sites, licensed by the Environmental Protection Agency (EPA) in order to control noise from the site are outlined below. These conditions stipulate operating noise levels that should not be exceeded at any noise sensitive location surrounding the site. The following sound pressure limits are set down by the EPA.

Daytime 55dB  $L_{Aeq}$  15mins

Night time 45dB  $L_{Aeq}$  15 Mins

Daytime is normally defined as 08:00 to 22:00 hours and night time is usually defined as 22:00 to 08:00 hours. The noise criteria outlined above are also in line with the World Health Organisation (WHO) guidelines for community noise. These guidelines recommend a noise level of 55dB  $L_{Aeq}$  within outdoor living areas in order to avoid serious annoyance during daytime and evening and a level of 45dB  $L_{Aeq}$  outside bedrooms during night time periods in order to avoid sleep disturbance.

These noise level limits will also be used as the target criterion for the operation of the expanded poultry operation.

## 6.3 DESCRIPTION OF EXISTING ENVIRONMENT

### 6.3.1 Existing Noise Levels

The noise climate in the vicinity of the existing site is relatively low. The operation of the existing poultry operation involves site transport traffic (cars, delivery and collection trucks), feed and water system, etc., which at present do not contribute to any significant noise levels at the nearest noise sensitive locations surrounding the site.

Noise levels measured at noise sensitive locations to the site, located within along the road leading to the site. The movement of vehicles along the road were the main noise contributors within this area.

#### 6.3.1.1 Baseline Survey Results

The baseline survey carried out as part of this EIS assessment has indicated that noise levels are within the EPA typically IPPC Licence guidance levels of 55dB  $L_{Aeq}$  for noise during the daytime and 45dB  $L_{Aeq}$  during the night time period at noise sensitive properties. The results of the baseline noise survey are summarised in **Table 6.2**.

**Table 6.2: Existing Noise Levels Measured During EIS Baseline Survey**

Location	Time	Leq	L <sub>90</sub>	L <sub>10</sub>	Survey Description	Noise
1	08.51	51	59	46	Measurement taken at boundary of residence	Vehicles audible from distance
2	11.37	50	58	45	Measurement taken at entrance to site	Vehicles audible from distance
3	12.12	53	62	48	Measurement taken at road side	Vehicles audible from distance
4	12.45	62	74	59	Measurement taken at road side	Vehicles passing at regular intervals

**6.4 IMPACTSDISTANCE**

During the operational phase of the proposed expansion of the poultry operation, there is a potential for increased site traffic and operational equipment including additional feed and water systems. As the footprint of the development expands, these noise sources have the potential to increase noise levels at these nearby properties. The fact that the proposed extension moves away from the nearest residences the risk of noise complaints is low

The main operational noise sources include:

- Site Traffic and
- Operational Equipment

The local road is currently used by heavy goods vehicles, agricultural vehicles and passengers cars. As the road surface in place is of poor condition this will lead to increase noise.

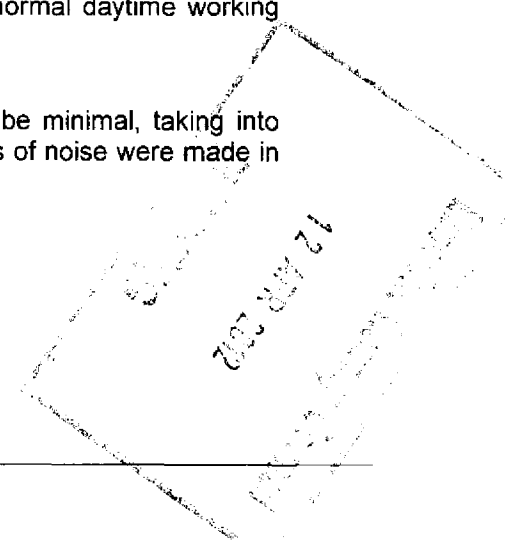
**6.4.1 Site Traffic and Operation Noise**

Operational Noise:

- Transport - of livestock, supplies, wastes, etc.
- Operational activity - ventilation, birds (on stocking and emptying)

Mitigation of operational noise will involve the site operating during normal daytime working hours. Also, pou'try house docrs will be kept closed when possible.

The impact of noise on the surrounding environment is expected to be minimal, taking into account the remoteness of site location and the fact that no complaints of noise were made in relation to the existing development.



## 6.5 MITIGATION MEASURES

During the operation of the existing poultry facility measurements determined that noise levels are within the EPA noise limit criteria of 55dB  $L_{Aeq}$  and 45dB  $L_{Aeq}$  night time at the nearest noise sensitive locations. It is envisaged that the noise levels would not increase due to the fact that the additional one poultry house on site are at not nearer noise sensitive locations.

In addition, good working practices will be maintained on site at all times including selection of plant equipment with a low inherent potential for noise emissions, maintenance of equipment and use of exhaust silencer where appropriate.

Mr O'Connor has received assurances from suppliers and poultry factories that all delivery and collections will take place between 08:00 hrs. and 17:00 hrs. This in turn will minimise the risk of noise complaints. The collection of birds may still take place after 22:00 hours due to bird welfare as the birds are more docile at night.

Likewise during the operational phase good working practices will be used including keeping doors closed, etc.

No mitigation measures are therefore proposed during the operational phase of this development with respect to noise and vibration. In general the distance between the new boundary and properties around the site will ensure noise levels at these locations will not cause any significant impact.

## 6.6 CONSTRUCTION IMPACTS AND MITIGATION

### 6.6.1 impacts

This negative impact for the construction phase of the development will be moderate but will be short-term in nature. During the construction phase of the project, there is potential for a temporary increase in noise levels during site preparation and development. Traffic transporting fill material to and from the site in addition to plant equipment used for developing the additional poultry growing houses are the main potential noise sources during this phase.

The relevant British Standard for guidance on the prediction, assessment and control of construction noise and vibration is BS5228: Part 1: 1997: 'Noise and Vibration Control on Construction and Open Sites'. While this document is not in force in Ireland, it contains a number of guidelines and recommendations that are considered appropriate and examples of good working practice for all construction contracts. These guidelines are detailed below and should form the basis of control of any potential impact to noise sensitive locations.

A certain amount of noise will be generated by:

- Transport - of constructional supplies to the site
- Site traffic - vehicles moving around the site during construction
- The construction of the housing

Considering the site levelling and foundation phase will take approximately ten days and then after a few weeks for the installation of housing and associated works should only take approximately two weeks, the construction noise will be temporary in nature. Mitigation measures will involve carrying out construction work during normal working hours, avoiding early morning or late evening work. Neighbouring dwellings are far enough from the site so that noise should not be an issue.

### Vibration

During the construction phase of the development, rock breaking may be required within parts of the site. Any vibration impacts during this phase will be imperceptible at the nearest noise sensitive locations to the site.

### 6.6.2 Mitigation

In order to aid in reducing the noise impact during this phase reference should be made to BS5228: *Noise control on construction and open sites*, which offers detailed guidance on the control of noise from demolition and construction activities. The following mitigation measures, taken from BS5228: *Noise control on construction and open sites*, will apply:

- Machinery with low inherent potential for generation of noise and/or vibration will be used;
- Noisy equipment will be sited as far away from sensitive properties as permitted by site constraints.
- Hours of construction will be limited so that noisy activities will be minimised during unsociable hours

### 6.7 RESIDUAL IMPACTS

With the application of binding noise limits and hours of operation during the construction phase, along with implementation of appropriate noise control measures as outlined above, the noise impact will be kept to a minimum.

The operational phase of the development is not considered to have a negative noise impact on its surrounding environment. The noise impact resulting from the development is not predicted to contribute to any significant levels of noise at the nearest noise sensitive locations surrounding the Patrick O'Connor's poultry growing operation.

During the operational phase of the development, noise levels are predicted to remain below the typically IPPC noise level limits at the nearest noise sensitive locations. This phase is envisaged to be of minor impact in terms of noise.

### 6.8 MONITORING

No monitoring is proposed, however if a complaint is received in relation to noise, an investigation will be commenced following the EPA guidance on noise monitoring.

## 7 LANDSCAPE AND VISUAL

### 7.1 INTRODUCTION

An assessment of the likely landscape and visual impacts of the proposed development by Patrick O'Connor to expand the existing capacity of the poultry growing operation will involve the assessment involved reviewing plans, sections and elevations of the existing, proposed scheme, various publications and reports, including other chapters of the Environmental Impact Statement, together with visits to the site and environs of the subject development.

### 7.2 METHODOLOGY

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

#### 7.2.1 Baseline Assessment

The buildings and structures at Patrick O'Connor poultry operation are constructed in line with planning permissions received from Limerick County Council. The existing poultry house is at similar proximity residential dwellings compared to the proposed poultry house.

Therefore the likely landscape and visual impacts of the proposed development are assessed against a baseline which acknowledges that the existing poultry units are closer to residential dwellings which will continue to elevate in line with the conditions of planning permissions as granted by Limerick County Council.

#### 7.2.2 Landscape

Landscape has two separate but closely related aspects.

The first aspect is **visual impact** that is the extent to which a new structure in the landscape can be seen. Visual impacts may be categorised under 'Visual Intrusion' and 'Visual Obstruction', where:

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

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

The second aspect is **impact on landscape character**, i.e. responses that are felt towards the landscape and draws on the appearance of the land, including aspect, land-use, topography vegetative cover etc. The character of the existing landscape setting is considered taking account of the various natural and man-made features, such as topography, landform, vegetation, land-use, the built environment.

#### 7.2.3 Significance Assessment Criteria

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

## 7.3 EXISTING ENVIRONMENT

### 7.3.1 Rathcahill West Landscape Context

The existing poultry growing operation at Patrick O'Connor, Rathcahill West, Templeglantine, Newcastle West, Co. Limerick is in an area which is relatively flat with existing poultry units well screened by hedgerows from the N21. While the buildings and structures associated with the plant are visible close to the entrance the poultry operation is well screened. The site is at a high elevation to the N21 as there is a raise of approx. 5 meters.

### 7.3.2 Landscape Setting

Patrick O'Connor's poultry operation is not visually prominent built feature in the locality and in addition there are other poultry units in the area.

In effect, a number of agriculture and commercial operations exist in the area, including general supplies, plumbing, poultry and beef farming operations. There is, therefore, amongst the rural surroundings a consistent theme of commercial and agricultural buildings. The Patrick O'Connor poultry operation is not the most prominent of these facilities and as a consequence it is not a significant influence on the landscape character of the surrounding area.

#### a. General Low-lying Agricultural Landscape

Rural, agricultural land with little topographic relief occurs on-site, the rise from the front to the rear of the site is only a rise of 3 meters. The existing road at the site entrance joins at the N21. Much of the landscape surrounding the site is flat where levels are commonly below 127 to 136m. Throughout the area the land is farmed with fields enclosed with a varied mix of hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*) hedgerow, stone walls and fences. Pasture and grassland for silage predominates as a land use and there is little arable farming in the area. Residential property is generally dispersed along local roads.

#### b. Developed/Built-up Areas

Development is prominent at the town of Newcastle West with its associated commercial areas. Such development is considered part of the normal Limerick landscape setting.

In addition, individual houses and clusters of residential development are dispersed along local roads.

### 7.3.3 Landscape Planning

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

#### 7.3.3.1 Inventory of Outstanding Landscapes in Ireland

The Inventory contains no listing within a 2 km from Patrick O'Connor's Poultry Operation, Rathcahill West and the proposed site does not fall within a listed Area of Outstanding Landscape.

#### 7.3.3.2 Limerick County Development Plan 2010 - 2016

The Limerick County Development Plan, 2010 - 2016 as amended, contains the following relevant landscape and visual references.



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

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

<b>Policy ENV 5: Enhancing Tree Cover</b>	It is the policy of the Council to preserve and enhance the general level of tree cover within the county, both in the countryside at large and also in the county's towns. The Council strongly encourages the establishment of native species, in particular broadleaf species.
<b>Policy ENV 6: Landscaping &amp; Development</b>	It is the Policy of the Council to ensure the adequate integration of development into the landscape by the retention of trees and landscape features and/or encouraging suitable planting.

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

**7.3.4 “Do-Nothing” Scenario**

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

**7.3.5 “Do-Nothing” Scenario**

Should the proposed development proceed the existing poultry operation will be expanded to 74,000 bird's capacity and will remain and continue to be developed under the conditions of the new planning permission

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## 7.4 CHARACTERISTICS OF THE PROPOSAL

### 7.4.1 Introduction

The construction of an additional poultry house with a capacity of 34,000 birds proposes to carry out a series of modifications to the site as set out in detail in **Chapter 2 Site layout and Construction** of the Environmental Impact Statement. In effect the principal landscape and visual aspect of the proposed development entails an expansion of the poultry growing operation.

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

## 7.5 IMPACTS

### 7.5.1 Impact Assessment

This involved examining the location of domestic dwellings and the location of the existing and proposed poultry house.

In assessing the impact the construction, operation and are considered, including construction, operation and restored.

### 7.5.2 Construction Phase of the Poultry House

The construction phase will have a relatively low landscape and visual impact. Aspects which pertain to the construction phase proper include:

- General site works,
- Vegetation removal,
- Excavations and stockpile of topsoil and subsoil, and
- The construction of the poultry house unit.

By its very nature all this activity will take place at a relatively low level and against the backdrop of the existing poultry houses with its various on-going activities. The final phase of the construction phase will be the erection of the poultry house.

### 7.5.3 Operational Phase

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

The completed additional poultry house will represent a minor feature in an otherwise low lying setting of the area. The additional house is alongside the existing houses and further away from residential dwellings. Though the feature will remain as a permanent reminder of the activity, the additional impact of the proposed additional poultry house in the longer term is considered to be of *minor impact*, due to the hedgerows, topography and colouring of the sheds, screening by hedgerow, low lying topography and colouring of the proposed sheds.

### 7.5.4 Landscape Planning Impact

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

### 7.5.5 Landscape and Visual Impact Summary

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

## 7.6 MITIGATION MEASURES

### 7.6.1 Landscape Treatments involving the Existing Poultry Operation and its Surrounds

Over the years the O'Connor family has managed and improved the hedgerows around the poultry operation. While the planting is maturing and only has visual presence at proximity, it adds to the diversity of habitat and landscape structure in the immediate surroundings and with continued development will assist in visually enhancing the hedgerow boundary.

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

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

## 7.7 RESIDUAL IMPACTS

Following the construction of the proposed development, there will be no significant impact in an overall landscape context. The continued management of the hedgerows and the maintenance of the poultry house will have no significant impact in terms of landscape and visual impact.

## SECTION B – THE NATURAL ENVIRONMENT

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

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

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

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

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## 8 TERRESTRIAL ENVIRONMENT

### 8.1 INTRODUCTION

This Chapter outlines the flora and fauna currently present in the area of the proposed extension to the existing poultry growing operation and assesses the impact of the proposal on the terrestrial habitats and species identified. Mitigation measures have been proposed where feasible. The ecological assessment involved walking over the site to identify habitats and species of flora and fauna present in order to determining the ecological diversity of this area.

### 8.2 METHODOLOGY

#### 8.2.1 Flora

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

Habitats have been classified in accordance to the standard recommended by The Heritage Council (Fossitt 2002). Plant nomenclature in this report follows Rose (2006) for vascular plants, Philips, (1980) for grasses, ferns, mosses and lichens. Attention is given to the possible presence of habitats, plant species that are legally protected under Irish and or European legislation. National Parks and Wildlife Service references to the site including maps of sites of conservation importance in the region and site synopsis were checked.

#### 8.2.2 Birds

During the ecological assessment birds observations were recorded

- All species encountered (seen or heard) were recorded and where possible their abundance noted.
- Areas of Hedgerow within the survey area were surveyed

#### 8.2.3 Mammals, Amphibians and Reptiles

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

#### 8.2.4 Survey Limitations

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

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

## 8.3 DESCRIPTION OF EXISTING ENVIRONMENT

### 8.3.1.1 Designated Sites

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

However the following designated areas are located in the Limerick region;

Site Code	Type of Designation	Distance from Site
Stack's to Mullagharirks (004161)	SPA	< 1 km
Curragnonase Woods (000174)	pNHA	28 km
Askeaton Fen Complex (002279)	SAC	27 km
Ballymorrisheen Marsh (001425)	pNHA	27 km
Lower River Shannon (002165)	SAC	31 km
Inner Shannon Estuary - South Shore (000435)	pNHA	30 km

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

### 8.3.1.2 Flora

#### GA1 Improved Grassland

The site comprises of improved grassland for silage making with some of the less well drained areas containing *Juncus sp.*. The fields comprise improved agricultural grassland with White clover (*Trifolium repens*), Creeping Buttercup (*Ranunculus repens*), Dock species (*Rumex sp.*), Ribwort plantain (*Plantago lanceolata*) and Meadow Buttercup (*Ranunculus acris*).

#### WL2 Treelines

The field boundaries around site comprise of the native Ash (*Fraxinus excelsior*), Hawthorn (*Crataegus monogyna*) also present Sycamore (*Acer pseudoplatanus*), with an understory of Bracken, Ivy (*Hedera helix*), and Hard Fern (*Blechnum spicant*).

Where boundaries earthen bank with drainage ditch and trees planted into the earthen bank.

#### Birds

During the walk over birds observations were recorded

- All species encountered (seen or heard) were recorded and where possible their abundance noted.
- Areas of Woodland within the survey area were surveyed by conducting of five-minute point counts.

## 8.4 IMPACTS

### 8.4.1 Do-Nothing

Should the expansion not be built there would be no impact on the site at the rear of the existing poultry growing operation.

### 8.4.2 Do-Something

#### 8.4.2.1 Flora

There will be a loss of plant and animal species from the proposed footprint, particularly with regard to improved grassland. The impact on site boundaries including hedgerows and trees will be negligible. It is expected that only a small section of hedgerow will be removed as part of the construction

The site is of low ecological value with poor species diversity, improved grassland which is mowed from silage twice per year.

#### 8.4.2.2 Designated Sites

There will be no impact on designated sites as the nearest designated site is more than 500 meters away.

#### 8.4.2.3 Birds

Whilst no breeding birds of high conservation concern are likely to be impacted by the proposed expansion, the site does not hold good quality breeding bird habitat which will be lost as a result of the development.

No birds of conservation concern were recorded onsite.

#### 8.4.2.4 Mammals

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

## 8.5 MITIGATION MEASURES

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

## 8.6 CONSTRUCTION IMPACTS AND MITIGATION

### 8.6.1 Impacts

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

Site clearance has the largest impact on ecology, involving the removal of pre-existing habitats and considerable soil disturbance. It will have least impact on fauna if carried out in the August-November period, avoiding the main bird and mammal breeding time.

Excavation and infill require the use of heavy machinery which has to be stored and maintained on site, but also has to gain access to the working area. This may cause damage to a wider zone of vegetation, particularly in wet weather when compaction and physical damage is likely.

### 8.6.2 Mitigation

As a minimum, the contractor will comply with all legislative provisions relating to hedgerow/tree removal and the protection of birds and bats and shall have regard to reducing impacts on nesting birds and breeding/roosting bats.

If badger setts are located pre or during construction, they will be dealt with in accordance with advice from the local NPWS wildlife ranger.

## 8.7 RESIDUAL IMPACTS

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

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## 9 AQUATIC ENVIRONMENT

### 9.1 INTRODUCTION

The abundant supplies of surface and groundwater within Ireland dictate the importance of measures to protect the aquatic environment. The intense nature of agriculture combined with the topography in County Limerick gives importance to the protection of aquatic measures required to protect local watercourses against water pollution.

As in the past presented problems whereby the aquatic environment has suffered the adverse effects of inadequate mitigation measures in the protection of local watercourses against water pollution against agriculture pollution.

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

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

### 9.2 DESCRIPTION OF EXISTING ENVIRONMENT

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

### 9.3 IMPACTS

#### 9.3.1 Do-Nothing

Should the extension not be built there would be no loss or changes in the drainage from the site

#### 9.3.2 Do-Something

##### 9.3.2.1 General

The current proposals at Patrick O'Connor poultry growing operation will increase the flow in the drainage ditch following rainfall as previously the rainfall would have percolated or evaporated within the area of the proposed development. Such potential impacts include loss or alteration of habitats and species, increased suspended solids, alteration of the hydrology and sediment deposition.

### 9.4 MITIGATION MEASURES

#### 9.4.1 Pollutants and Waste

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

## 9.5 CONSTRUCTION IMPACTS AND MITIGATION

### 9.5.1 Impacts

#### 9.5.1.1 Loss or alteration of habitats and species

There will be a loss of improved grassland habitats and species as a consequence of the expansion of the site. There will be an increase in flow in the drainage ditch; the increase water level may alter the species in the drainage ditch.

#### 9.5.1.2 Increased suspended solids

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

#### 9.5.1.3 Pollutants and waste

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

### 9.5.2 Mitigation

#### 9.5.2.1 Loss or alteration of habitat and species

To minimise the loss of the habitat and species, the area of construction should be kept to the minimum required. Construction should be approached from the existing poultry operation to avoid disturbing neighbouring habitats. Increased water flow to drainage ditches should be managed and improved where necessary.

However, since it is already a low ecological habitat, the impacts from the loss is not significant

#### 9.5.2.2 Increased suspended solids

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

#### 9.5.2.3 Pollutants and Waste

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

In addition, should contained chemical portable toilets be used, all sewage will be removed from the site to an authorised treatment works. No sewage will be discharged to watercourses.

## 9.6 RESIDUAL IMPACTS

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

## 9.7 MONITORING

Routine (six month) monitoring of the drainage ditch should be conducted

## 10 SOILS, GEOLOGY AND HYDROGEOLOGY

### 10.1 INTRODUCTION

This chapter outlines the environment assessment with regard to soils, geology and hydrogeology of the area. This report should be read in conjunction with the site layout plans for the proposed development and the project description sections of the Environmental Impact Statement. In the assessment, particular attention is focused on the likely presence of contaminated soils and groundwater and on sensitive receptors, such as groundwater dependent ecosystems, vulnerable aquifers or water supplies close to the site.

### 10.2 METHODOLOGY

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

- Geological Survey of Ireland (GSI). 1999. "Geology of the Shannon Estuary". Sheet 17. Scale 1:100,000.
- GSI, 1999. "Geology of the Shannon Estuary. A Geological Description of the Shannon Estuary Region including parts of Clare, Limerick and Kerry, to accompany the Bedrock Geology 1:100,000 Scale Map Series, Sheet 17, Shannon Estuary.
- GSI & Limerick County Council, 1998. County Limerick Groundwater Protection Scheme.
- GSI Groundwater Maps online at [www.gsi.ie](http://www.gsi.ie).
- GSI well records database.

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

### 10.3 DESCRIPTION OF EXISTING ENVIRONMENT

The natural topography of the site ranges from 127 to 136 meters. The topography of the land is relatively flat with a slight drop to the back of the site towards the proposed poultry house.

#### 10.3.1 Soils and Subsoils

The soils in the area occur on flat and undulating relief at elevations varying from 10 to 130 meters. They are mainly associated on the landscape with the Elton Series and to a lesser degree with the Patrickeville and Rathcannon Series. They occur throughout the limestone plain but mainly north of the terminal moraine of the Weichsel glaciation between Dromcollogher and Newcastle West.

These poorly drained soils, of clay loam to clay texture and of high to very high base status, have been classified as podzolic Gleys. The profile is characterised by a dark-brown surface horizon overlying horizons that are greyed and that display drab greyish colours and abundant mottling; the mottles increase in size and contrast with depth where they tend to mask the greyish background colours. These horizons overlie a thick strongly greyed textural B horizon which merges with the parent material at approximately 80 inches deep. Structure is only moderately well developed and weak in the upper horizons and becomes massive with depth; only the upper horizons are friable. Likewise root development is satisfactory in the surface horizons but poor further down. The poor drainage is caused mainly by slow run-off due to the relief, aggravated by the poor permeability of the soils themselves.

The Howarstown soils are devoted mostly to pasture. Grass growth is generally poor. Too well-defined grassland types occur. One has an abundance of the species of the well-drained grasslands growing side by side with moisture-loving rush species such as *Juncus effusus* (soft rush), *Juncus articulatus* (jointed rush) and *Juncus mitis* (glaucous rush). See Figure 8 & 9

### 10.3.2 Bedrock Geology

The site is underplaved with Dinantian Pure Unbedded Limestones. The rocks form part of a system of two tight major folds, whose axes are orientated ENE-WSW. Overall, the strata dip north, west and south, roughly at right angles to the edges of the GWB. Measured dip angles are between 10 and 40° meters and reflect the steep mounds of the Waulsortian limestones as well as the folding. N-S, E-W and NE-SW trending faults displace the rock units; they are mapped at the edges of the body, and although no faults or minor folds are mapped in the centre of this area, they will be present. See Figure 7.

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

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

### 10.3.3 Hydrogeology

#### 10.3.3.1 Aquifer Classification

The Dinantian Pure Unbedded Limestones are reported (GSI, 1998) to be extensively karstified and dolomitised. In the Newcastle West area karstification is reported to occur to depths up of 800 metres. Dolomitisation is a process by which circulating groundwater replaces calcium with magnesium and results in an increased porosity and permeability of the host rock. The Dinantian Pure Unbedded Limestones Formation in the Rathcahill West area is classified by the GSI as a low importance important karstified aquifer. See Figure 10

#### 10.3.3.2 Groundwater Levels

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

#### 10.3.3.3 Groundwater Quality

The hydrochemistry of groundwater beneath the site is dominated by the presence of limestone in both the bedrock and subsolls and is hard, calcium bicarbonate type water.

#### 10.3.3.4 Groundwater Usage

The site usage is recorded at a flow meter from the public supply and the site has a poor quality on-site well.

## 10.4 IMPACTS

### 10.4.1.1 Soils

The soils around the development have no intrinsic value.

### 10.4.1.2 Geology

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

### 10.4.1.3 Hydrogeology

Following construction a significant proportion of subsoil's will have been removed. This will potentially increase the aquifer vulnerability resulting in groundwater being more vulnerable to pollution.

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

## 10.5 MITIGATION MEASURES

### 10.5.1.1 Hydrogeology

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

## 10.6 CONSTRUCTION IMPACTS AND MITIGATION

### 10.6.1 Impacts

#### 10.6.1.1 Soils

The proposed development will require the stripping of topsoil's resulting in a loss of soils over the footprint of the poultry house. This is an essential part of the development and is an impact that cannot be mitigated. The construction zone will occur within existing hard standing area, minimising impact on surrounding grassland areas.

#### 10.6.1.2 Geology

It will be necessary to import rockfill as foundation material for the proposed development.

#### 10.6.1.3 Hydrogeology

The removal of subsoil's will potentially result in an increase aquifer vulnerability making groundwater more vulnerable to pollution.

### 10.6.2 Mitigation

#### 10.6.2.1 Soils

Topsoil stripped will be temporarily stockpiled before removal off site reuse.

### 10.6.2.2 Geology

Rock fill material will be sourced from the local quarry which lies approximately 5 km away.

### 10.6.2.3 Hydrogeology

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

Avoidance of contamination of surface water through

- Removal of topsoil off-site preventing soil particles entering surface water
- Bunded areas will be in place for fuels and chemicals

## 10.7 MONITORING

### 10.7.1 Construction Phase

Measures will be taken in order to prevent contamination of groundwater

- Removal of topsoil
- Provision of bunded areas
- Routine checks

### 10.7.2 Operational phase

The following monitoring will be undertaken during the lifetime of the facility:

- pH, conductivity and other water quality measurements in the site well on an annual basis

## 11 CLIMATE

### 11.1 INTRODUCTION

Climate can refer to both the long-term weather patterns in an area and also to the more localised atmospheric conditions, referred to as the microclimate. Climate has implications for many aspects of the environment from soils to biodiversity and landuse practices. In global sense facilities such as Patrick O'Connor's poultry growing operations, the potential for increases in air pollutants, which may contribute to climate change. This impact assessment only deals with the proposed expansion to the poultry operation.

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

### 11.2 METHODOLOGY

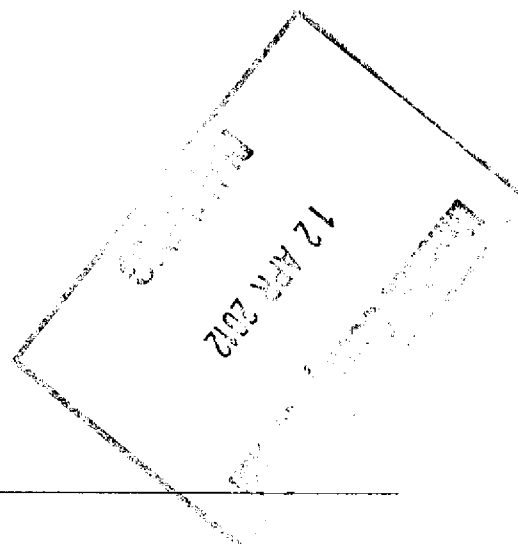
The climate of the Co, Limerick Region is characterised by the frequent passage of Atlantic low pressure weather systems and associated frontal rain belts from the west during much of the winter period. Over the summer months the influence of anticyclonic weather conditions will result in drier continental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

The nearest Met Eireann meteorological station is at Shannon Airport and long-term measurements of wind speed/direction and air temperature for this location would be representative of prevailing conditions experienced in the vicinity of Patrick O'Connor's poultry growing operation.

### 11.3 DESCRIPTION OF EXISTING ENVIRONMENT

Meteorological data from the Met Eireann station in Shannon Airport during the baseline survey has been compiled. The 2010 average monthly data has been compared to the 30-year averages for each month from Shannon Airport to determine the degree of representation of the actual meteorological conditions versus what is experienced on average at the site. This comparison is presented in **Table 11.1**.

A comparison of temperatures indicates that for each month of 2010, temperatures were on average lower than the corresponding 30-year averages by a factor of 0.7°C. For total rainfall values, the January 2010 total rainfall was below the 30-year average.



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Table 11.1: 2010 and 30-year average meteorological conditions from Shannon Airport

Year	Total Monthly Rainfall (mm)		Average Temperature (°C)		Average Wind Speed (knots)	
	2010	mean	2010	mean	2010	mean
Jan	30.8	97.8	2.4	5.4	2.3	4.8
Feb	35.1	71.5	3.3	5.6	3.3	5.1
Mar	80.4	71.4	6.4	7.1	6	6.9
Apr	71.4	55.7	9.8	8.8	10.6	9.9
May	56.8	59.5	11.7	11.3	13.6	13.1
Jun	33.4	62.8	15.8	14	18.2	16.2
Jul	123.1	56.8	16	15.7	17.7	17.8
Aug	39.1	82.4	15	15.5	17.1	16.9
Sep	138.9	81.6	14.5	13.6	15.5	14.4
Oct	76.8	93.4	10.8	11.1	11.4	11.2
Nov	133.3	94.8	5.7	7.5	6.6	7.5
Dec	26	99	0.7	6.3	1.4	5.8
Annual	845.1	926.7	9.4	10.1	10.3	10.8

## 11.4 IMPACTS

### 11.4.1 Do Nothing Impact

If the proposed extension does not go ahead, the capacity of the poultry growing operation remains the same. Should this happen, emissions from the poultry houses including all aspects of the operation would remain the same.

### Do Something Impacts

If the proposed extension does go ahead there are no direct impacts predicted on microclimate as a result of the proposed extension. The extension will increase the capacity of the operation.

## SECTION C – MATERIAL ASSETS

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

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

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

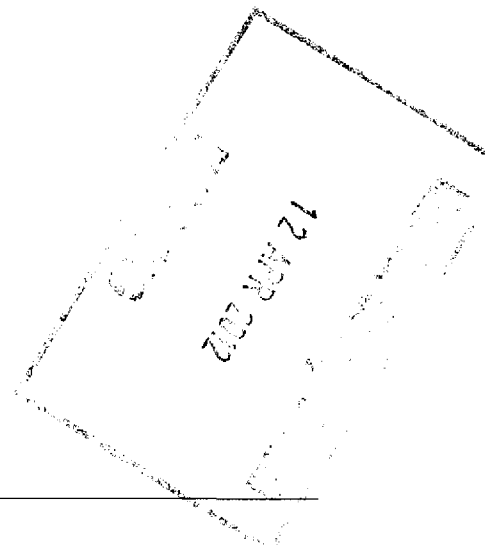
**Material Assets: Natural or other resources** including mineral resources, land and energy

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

Agricultural enterprises interact, to a large extent, with the natural environment in terms of climate, air quality, soil, hydrology and hydrogeology. Some domestic animals, such as horses and milking cows, may be impacted by traffic-generated noise.

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

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## 12 MATERIAL ASSETS - AGRICULTURE

### 12.1 INTRODUCTION

The potential agricultural impact from the proposed expansion of the poultry growing operation was assessed. The location for the proposed extension is currently a Greenfield site and is completely within Patrick O'Connor owned lands. The proposed extension will occupy an area of approximately 0.8 hectares of which are entirely agricultural lands bounded by hedgerows.

No additional holdings will be directly impacted through loss of land by the proposed scheme as all lands proposed for the extension are within the ownership of Patrick O'Connor.

### 12.2 METHODOLOGY

A desktop survey and a field survey were carried out to assess the potential impact on agriculture in the area. The first was a walkover of the site, which was conducted in March 2012. This walkover observed a number of factors including:

- The current agricultural practice taking place on the lands,
- The quality and drainage of the soils, and
- Level of management currently practiced.

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

### 12.3 DESCRIPTION OF EXISTING ENVIRONMENT

#### 12.3.1 Limerick

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

#### 12.3.2 Rathcahill West

The site for the proposed development is situated south west of Newcastle West. The lands are relatively flat and all are under grass. The site is predominated by improved agricultural grassland. The soils are poorly draining in the area, which is evident by the presence of rushes.

The lands relating to the proposed extension are owned by the developer and are currently used for silage cutting twice per year. The lands are well managed with good grass swards in evidence.

### 12.4 IMPACTS

#### 12.4.1 Do-nothing

Should the proposed extension not be built, the practice of cutting silage will continue twice per year on the site.

#### 12.4.2 Do-something

A potential impact on agriculture in the area are land loss as a result of the footprint of the development is the loss of land.

**Land loss:** Should the proposed development receive planning permission there will be loss of lands to facilitate the extension. The lands proposed for the extension are wholly within the ownership of Patrick O'Connor. However, Patrick O'Connor currently cuts silage on the land.

## 12.5 MITIGATION MEASURES

No mitigation required as the land is of low ecological value

## 12.6 CONSTRUCTION IMPACTS AND MITIGATION

### 12.6.1 Construction Impacts

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

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

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

**Dust:** The generation of dust during construction has a nuisance value and livestock are at risk to eye irritations from high levels of windblown dust particles.

### 12.6.2 Mitigation

**Noise:** No mitigation is required, if a complaint an investigation will be commenced

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

**Dust:** Mitigation measures for construction dust are outlined in section 5.6.2. These measures will be followed.

## 12.7 RESIDUAL IMPACTS

No residual impacts on Agriculture are predicted.

## 13 MATERIAL ASSETS – NATURAL AND OTHER RESOURCES

### 13.1 INTRODUCTION

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

### 13.2 DESCRIPTION OF EXISTING RESOURCES

#### 13.2.1 Landuse and Soil

The proposed additional poultry house will occupy an area of approximately 0.6 hectares, which is currently a Greenfield site.

The soil types occurring within the footprint of the proposed extension are mostly made up of glacial till. A detailed description of the existing soil environment is provided in **Chapter 10 Soils, Geology and Hydrogeology**.

It is estimated that approximately 350m<sup>3</sup> of topsoil will be removed from the footprint of the proposed poultry house. This material will either be placed immediately and removed off site or stockpiled appropriately for later use.

#### 13.2.2 Transport Network

The transportation of all the bulk of raw materials transported to the poultry growing operation is brought in by road. The site is close to the National Primary route the N21. The Local road access to the site is in poor to reasonable condition.

#### 13.2.3 Utilities

The area in the immediate vicinity of the poultry operation is rural in nature, with much of the land in agricultural use. However, a network of utilities associated with house and commercial operations present including the following:

- Fuel supplies,
- Plumbing supplies
- Other Poultry growing operations

#### 13.2.4 ESB

The site has good electrical network with 38kV and 10Kv lines in the area

### 13.3 IMPACTS AND MITIGATION

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

#### 13.3.1 Land and Soil

In total the expansion to the poultry operation will occupy approximately 0.6 hectares of land for the main footprint, all of which are completely within Patrick O'Connor owned lands. As such, it is considered that there will be no significant impact on land or soils. Impacts on the agricultural use of land are discussed in **Chapter 12 Material Assets – Agriculture**.

### 13.3.2 Transport Network

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

### 13.3.3 Economic Minerals

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

### 13.3.4 Raw Materials Required

#### 13.3.4.1 Construction of the Poultry House

Construction material such as aggregates and concrete, when needed will be brought in from nearby sources such as local Quarry's.

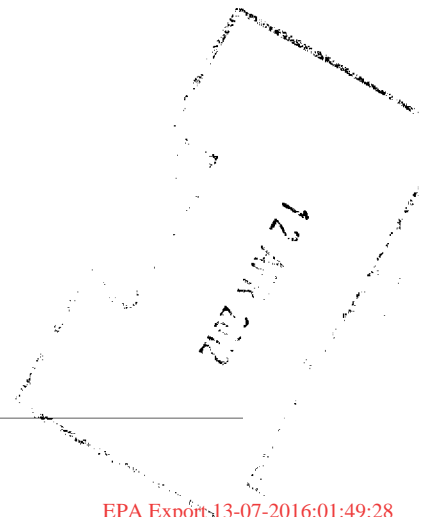
#### 13.3.4.2 Raw material inputs for increased poultry production capacity

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

## 13.4 RESIDUAL IMPACTS

No residual impacts are predicted

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## SECTION D – ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL HERITAGE

This Section of the Environmental Impact Statement examines impacts of the development under the headings;

- Architecture
- Archaeology
- Cultural Heritage

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

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## ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL HERITAGE LEGISLATION AFFECTING THIS PROJECT

### National Monuments Legislation (Principal Act 1930 (as Amended))

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

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

Under Section 14 of the Principal Act (1930):

It shall be unlawful...

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

or

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

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

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

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

In the 1994 Amendment of Section 12 of the Principal Act (1930), all of the sites and 'places' recorded by the Sites and Monuments Record of the Office of Public Works are provided with a new status in law. This new status provides a level of protection to the listed sites that is equivalent to that accorded to 'registered' sites [Section 8(1), National Monuments Amendment Act 1954] as follows:

The Commissioners shall establish and maintain a record of monuments and places where they believe there are monuments and the record shall be comprised of a list of monuments and such places and a map or maps showing each monument and such place in respect of each county in the State.



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

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

### **Local Government Planning and Development Act**

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

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

The act defines a 'protected structure' as follows:

- (a) a structure, or
- (b) a specified part of a structure.

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

'Protection', in relation to a structure or part of a structure, includes conservation, preservation, and improvement compatible with maintaining the character and interest of the structure or part;

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

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

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

Section 58, subsection 4 states that:

Any person who, without lawful authority, causes damage to a protected structure or a proposed protected structure shall be guilty of an offence.

## 14 ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL HERITAGE

### 14.1 INTRODUCTION

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

An assessment of the impact on architectural, archaeological and cultural heritage was undertaken by Montgomery EHS to assess the impact of an extension to the existing poultry operation at Patrick O'Connor's proposed poultry growing operation. This chapter outlines issues with respect to the proposed development on the receiving archaeological, architectural heritage and cultural heritage environment and proposes ameliorative measures to safeguard any monuments, features or finds of antiquity.

The proposed two poultry growing houses are located on a green field site to the south of the existing poultry house, and are located in the townland of Rathcahill West.

### 14.2 METHODOLOGY

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

#### 14.2.1 Desk Studies

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

Source	Description
Record of Monuments and Places (RMP)	The Record of Monuments and Places (RMP) of the Department of the Environment, Heritage and Local Government, records known upstanding archaeological monuments, their original location and the position of possible sites.
The Topographical Files of the National Museum of Ireland (NMI)	The topographical files identify recorded stray finds held in the NMI. The archive was studied for possible finds occurring in townlands associated with the proposed route.
Documentary and Cartographic Sources	Documentary and literary references, including excavation bulletins and historic maps, were also consulted to predict likely archaeological remains surviving on site and to elucidate the development of the immediate environs of the study area. The maps consulted include, the Down Survey Map of 1656, the First Edition Map of the OS six-inch series for Limerick (surveyed in 1840-1 and published in 1844) and revisions to the OS maps for Limerick which were made in 1914.
Previous Archaeological Excavations	'Excavations', an annual bulletin and web-based database ( <a href="http://www.excavations.ie">www.excavations.ie</a> ), was consulted to establish whether excavations had been carried out in the vicinity of the proposed development.
Development Plans	The Limerick County Development Plan (1999) and Draft 2005-2011 Plan was consulted for a list of Protected Structures, if any in the vicinity of the proposed development. This document list 'sites, items and structures of

Source	Description
	archaeological, historic, artistic and scientific interest' according to the townland in which they occur, all items listed in the document are now considered as Protected Structures, they have been given increased protection under the Local Government (Planning and Development) Act 1999.

### 14.2.2 Field inspection

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

## 14.3 DESCRIPTION OF EXISTING ENVIRONMENT

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

A study was also undertaken of all previous archaeological excavations that occurred within the area around the O'Connor's poultry operation from 1970 to 2011, the only years for which this information is currently available (see attachment 1). Please note that these sites have been labelled on **Figure 14** according to their RMP No.

A complete list of protected structures within the EIS was also compiled, based on the Record of Protected Structures included in the Limerick County Development Plan 2010 - 2016.

### 14.3.1 Section B – Archaeology

It should be noted that the information provided below is a very brief synopsis of the archaeology of the environs of the site.

#### 14.3.1.1 Desk and Field Survey

The RMP constraints map relevant to the proposed development is sheet 028 of the Ordnance Survey six-inch series for County Limerick. The sites are numbered according to the Ordnance Survey six-inch sheet on which they are located, so that site 020 on six-inch sheet 010, is listed as LI028:020. A county code, LI for Limerick, is included. The national grid reference (NGR) is provided for each site, as is the townland in which it is located.

There are no recorded archaeological sites within the footprint of the existing or proposed poultry house. However there are a number of sites listed in the Record of Monuments and Places (RMP) of the Department of the Environment Heritage & Local Government which occur within 1000m of the proposed development and these are outlined in Attachment 1. Recorded RMP sites are shown on the accompanying site location map (**Figure 14**).

The existing site and proposed site of the new poultry houses has been surveyed by Montgomery EHS and there is no evidence of any archaeological features. The site of the proposed poultry house will be extracted into too made ground conditions suitable for construction works. These works will be conducted to ensure if any archaeological sites/finds are made the appropriate authorities will be notified prior to any additional works commencing.

### 14.3.2 Section C – Cultural Heritage

It should be noted that the information provided above is a very brief synopsis of the cultural heritage of the environs of the site.

Townland boundaries

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

- **Ballymurragh West** boundary which takes the form of a hedgerow and the N21
- **Lissurland** townland boundary which is defined by hedgerow
- **Glenmore East** boundary is located to the west of Rathcahill West and bounded by hedgerow
- **Templeglentain East** townland boundary by a Hedgerow
- **Meenylane south** is located to the west of Rathcahill West

## 14.4 IMPACTS

### 14.4.1 Architectural Heritage Impacts

Neither the Limerick County Development Plan (1999) or the Draft Development Plan 2005–2011 list any protected structures within the footprint of proposed poultry house.

### 14.4.2 Archaeological Heritage Impacts

There are no recorded archaeological site within the proposed or existing sites. There are no upstanding archaeological remains will be affected by the proposed development.

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

### 14.4.3 Cultural Heritage Impacts

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

There are several features of cultural heritage interest within the proposed development area and in its surrounding townlands. The proposed development will not have any direct impact on these features.

## 14.5 MITIGATION MEASURES

### 14.5.1 General

Neither the Limerick County Development Plan list any protected structures within the proposed poultry house area.

The developer's attention is drawn to the National Monuments Legislation (1937-2004), which states in the event of the discovery of archaeological finds or remains, the Department of the Environment,

Heritage and Local Government should be notified immediately. The developer will notify if any archaeological finds or remains are found during the project.

#### 14.5.2 Architectural Heritage

There are no recorded archaeological sites within the proposed development area and therefore no outstanding archaeological remains will be affected by the proposed development.

No mitigation required

#### 14.5.3 Archaeological Heritage

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

#### 14.5.4 Cultural Heritage

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

### 14.6 CONSTRUCTION IMPACTS AND MITIGATION

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

### 14.7 RESIDUAL IMPACTS

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

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12 APR 2012