Environmental Impact Statement

Proposed New Poultry Unit

For

Mr. Niall Mc Kenna

At, Knockballyroney Td., Scotstown, Co. Monaghan.

Signed:- J. Beggan 18/11/14

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087-2924047

TABLE OF CONTENTS

1.0 INTRODUCTION & PREAMBLE

The applicant, Niall Mc Kenna, Contacted Joe Beggan, Bsc(Hons)Eng., Arch. Tech., MIEI, MCIOB to carry out an Environmental Impact Statement (EIS) in relation to construct two new poultry units within existing farming complex with the following stocking capacities

- 2 Units With Maximum Of 42,000 Birds In Each

The existing development is located c. 10.0 km north west of the county town Of Monaghan and c.4.5kw north of the village of Scotstown, Co Monaghan. The existing development consists of 4 No. mushroom units and ancillary store. The development has been run and managed by the applicant Mr Niall Mc Kenna for over 10 years. Mr. Mc Kenna has substantial experience in the poultry industry having been involved for most of his adult life. He also is involved in the supply of floor shavings and bedding for the poultry industry together with other ancillary equipment.

Having reviewed the terms of reference regarding the application, the consultant undertook a study of the impacts both real and perceived, which the proposal would have on the receiving environs and community. The areas, which were reviewed, include all areas, which an Environmental Impact Statement is required to cover. The applicant is obliged to have an EIS carried under the following regulations:

1) EC (Environmental Impact Assessment) Regulations 1989: Article 24, 1st 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".

- 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 (i.e 100k places), 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".

1.1 IDENTIFICATION OF LIKELY SIGNIFICANT IMPACTS

Schedule 6 of the Planning and Development Regulations requires that the EIS describes likely, direct and indirect significant impacts of a proposed scheme. The EPA (Guidelines on the information to be contained in Environmental Impact Statement 2002) defines an impact as "the degree of change in an environment resulting from a development" and goes on to elaborate on impacts in terms of quality (positive, neutral or negative), significance (imperceptible, slight, moderate, significant or profound), duration (temporary, permanent, short-term or long-term) and type (cumulative, indeterminable, irreversible, residual, synergistic or "worse case")

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

- The quality and sensitivity of the existing/baseline receiving environment.

- The relative importance of the environment in terms of national, regional, or local importance.

2.0 NON-TECHNICAL SUMMARY

Monaghan County Council Planning Authority requires that an Environmental Impact Statement be submitted in support any poultry development where the capacity on site will exceed 40,000 birds.

The area is a predominantly rural farmland and the proposed bird density will be for 84,000 birds. This proposed poultry units are to be located approximately 32.0 meters off a Local Road (L1000) which connects Knockatallan to Tydavnet and approximately 10.0 km North West of the county town of Monaghan.

The applicants own dwelling is approximately 200 meters to the north west. There are two dwellings located within 100m of the proposed development and letters of consent from both owners accompany this application.

The proposed poultry units will be insulated timber construction set on a concrete wall and foundation, would have a stocking capacity of approximately 42,000 broilers each. The operation, as with the existing complex, would involve the rearing of chickens from day-olds over a period of approximately 7 weeks, the exact duration depending on market requirements. Chickens will be supplied and collected at the cycle end by Western Brand Poultry, Ballyhaunis, Co. Mayo. Feed will be supplied by Corby Rock Feeds, Monaghan. Dead birds will be collected by College Proteins, Nobber, Co. Meath.

The floor will be litter-based, with wood shavings supplied by Northline Shavings & Bedding, Scotstown, Monaghan. Spent litter, containing poultry manure, will be collected at the end of each batch cycle by CLR Co-Op Ltd. and subsequently used in the manufacture of mushroom compost at various compost yards throughout the country (refer to letters in Appendix 2).

It is proposed that a Gas heating will be supplied to the unit, and a mechanical ventilation system installed. Two new new waste water (washings) tanks will be provided on site to serve this development with a capacity of approximately 10,000 litres each. The nearest habitable dwelling is 200.0m to the north west of the existing development. The capacity of the tanks will be as follows.

- 2 Tanks @ 18' x 10' x 8' deep.

3.0 ALTERNATIVE CONSIDERATIONS

3.1 Alternatives explored during the Design Process

The applicant chose this typical type of housing employed as it is similar to other such developments in the county. The reasons as to why no alternative was chosen are as follows and based on knowledge provided by poultry farmers in the greater area:

- The house type is found to be satisfactory as regards day to day running and its Conditions for the birds.
- No significant problems of operation have been encountered in the running of the proposed house type.
- The manufacturers of the house are constantly working to ensure their housing is designed to the highest specification in terms of energy efficiency and minimal environmental disruption.

3.2 Alternative location of site.

A review of all other lands in the ownership of the applicant was undertaken prior to selection of this site. Acquiring alternative lands was ruled out as the additional costs imposed would make the project cost prohibitive. Other lands explored were of drumlin profile and would require extensive remedial works. Furthermore, construction costs would increase as no access to the road infrastructure is readily available. Coupled with this, operational costs would increase as a transport route through the existing farm for meal, birds and litter would have to be provided. The electrical infrastructure would also have to be extended via a bespoke line to serve the development. With this in mind, the applicant chose this site for the following reasons.....

- The area has no signs of over development either from a domestic or agricultural perspective.
- Existing entrance onto public road can be utilised.
- Resources available at site.
- Existing drainage system capable of facilitating the development.
- The EPA's BATNEEC Guidance Note for the Poultry Sector advises that the developer should have ample land space in the vicinity of his poultry complex to be available for use as lined carcass disposal sites in the event of a disease outbreak.
- The site chosen is close proximity to the applicants residence
- The site is substantially level and requires minimal excavation works.

3.3 Alternative activities/ processes

The developer has no reason to employ alternative operational procedures than those proposed in the new development for the following reasons:

- The nature of the operation is such that there is little alternative to the process in terms of how the business operates as there is required adherence to guidelines provided by the flock supplier, Bord Bia and the Department of Agriculture.

3.4 Final design choice

It was decided to construct the new development to the proposed design for the following reasons:

- Thermal efficiency / Running costs
- Appearance / profile in the landscape
- Economical efficiency
- Environmental efficiency
- Lack of alternatives available
- Requires less energy to heat [Wooden v concrete structure]
- No significant problems known with this type of unit.

Furthermore, the applicant is proposing the operational procedures for the following reasons:

- Existing farmland holding
- Environmental efficiency
- Lack of alternatives available

3.5 Difficulties encountered in compiling the required information:

The process and activities associated with developments of this nature are well established and understood. Examination was undertaken of all elements of the development such as site selection & integration, building type and style, waste disposal, vehicular access and impacts. No significant difficulties were encountered in compiling the required information.

3.6 Potential Impacts of the Proposed Scheme

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

General Criteria used to quantify the Potential Impacts of the Proposed Scheme

Degree of Impact/Significance level		Definition of Impact
Profound	Significant Impact	An impact, which obliterates sensitive characterisation
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

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

3.7 Construction Impacts

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

The issue of construction dust dispersion may be exaggerated with vehicles transporting sand/gravels/soils etc. to and from the site having the potential to cause an environmental nuisance. The effect of construction activities on air quality, in particular construction dust, will not be significant following the implementation of the proposed mitigation measures outlined below. The main environmental nuisance associated with construction activities is dust.

3.7.1 Mitigation

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

Hard surface roads shall be swept to remove mud and aggregate materials from their surface. Any un-surfaced roads shall be restricted to essential site traffic only.
Public roads outside the site shall be regularly inspected for cleanliness, and cleaned as necessary.
Material handling systems and site stockpiling of materials shall be designed and laid out to minimise exposure to wind. Diesel engines of 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.

3.7.2 MONITORING

There is no proposed monitoring for dust or odour at the Poultry growing operation. If any complaints are received, a follow-up investigation will be initiated. This will be initiated as soon as feasible and all results made available to the Local Authority and EPA for inspection.
In the event that dust or odour from the proposed development is creating an environmental nuisance. An ambient dust deposition survey will be carried out by an aid quality specialist and mitigation measures will be developed to eliminate the nuisance. In the event of Odour nuisance an investigation following the EPA Air Guidance on Odour Assessment (AG5) will be initiated.

3.8 Construction

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

3.9 Residual Impacts

There will be a minor loss of habitat from beneath the footprint of the proposed units.

4.0 SITE LOCATION

The proposed development will be constructed at IGR [Irish Grid Reference] X - 259963.324, Y - 341145.393. The existing development is located c. 10.0 km north west of the county town Of Monaghan and c.4.5kw north of the village of Scotstown, Co Monaghan. The applicants own dwelling is approximately 200 meters to the north west. There are two dwellings located within 100m of the proposed development and letters of consent from both owners accompany this application.
The site of the proposed development is a Greenfield area, periodically used for grazing and is immediately adjacent to the existing mushroom units. The site boundary is well defined by a combination of hedgerow, trees and fencing. The site chosen for the proposed poultry unit is the most favourable location – being situated in proximity to the existing activity means deliveries to and collections from the unit are localised (only one stop required on the site) and the potential for increased traffic levels is minimised. In addition to this is the fact that visibility from the approach roads is minimal. (See Appendix 1).

There is low density housing and minimal development in the general vicinity. As there are no residences in close proximity to the development, they have not been considered for the purpose of this assessment.

The site of the existing development is an established farm holding located on existing family lands. The site boundaries are marked by a combination of hedgerow, trees and fencing and all hedgerows are mature and dense.

The developer chose the site of the existing development for the following reasons:

- An existing entrance is available at this site.
- Resources available at site- water, gas, electricity etc.
- Localised stops for all ancillary traffic- deliveries & collection of birds, waste etc.
- Existing drainage system capable of facilitating extended development.
- The EPA's BATNEEC Guidance Note for the Poultry Sector advises that the developer should have ample land space in the vicinity of his poultry complex to be available for use as lined carcass disposal sites in the event of a disease outbreak.

5.0 SITE LAYOUT

The proposed poultry unit would be situated approximately 15m to the rear of the existing mushroom houses which are to be retained and 32m from the entrance to the site and the local road to the north of the site, as indicated in Appendix 1 "Site Layout Plan". The proposed development would have a capacity of approximately 84,000 broilers. The maximum height of the proposed house would be approximately 5.3m, at the highest point of the sloping roof, as for the existing house. The proposed house will have an internal controls room at the front corner of the house. Each washings tank has a capacity of approximately 10,000 litres. It is proposed to construct two tanks.

The site boundary is marked by hedgerow, trees and fencing. The existing entrance to the east of the existing mushroom units would facilitate the proposed development, as indicated in the Site Layout Plan. (See Appendix 1)

Drainage: Yard and roof runoff are diverted via the existing storm water drainage network to a surface water drain. The same will apply in the case of the new poultry house.

Drainage: Yard and roof runoff from the existing agricultural development will be separated. The yard run off will be diverted into the proposed new washings tanks. All roof water will be collected and diverted into a gravel based soil polishing bed, prior to final discharge. It is recommended that all existing drains in the vicinity will receive deepening and rejuvenation.

6.0 PLANNING CONSIDERATIONS

6.1 Planning Justification

There has been an existing mushroom unit development at this location for over 20 years. The development is thus an 'established use'. The development has legitimacy and a valid, defensible status under the Planning Acts. This established use is thus to the benefit of the site and the proposed development, being a continuation of this use, must be considered in this context. There ought to be recognition therefore of the existing use of the land for agricultural purposes.

There are beneficial environmental implications for extending the use of the existing operation as opposed to opening a new development in a different location. The environmental impacts on the area as a result of this established use will be integrated and 'subsumed' into the existing effects. There will be no generation of any 'new' effects. Environmental impact will thus be confined to the existing geographical area. There will be no significant extension of effects geographically nor any new effects generated within the technical operational context.

7.0 CONSTRUCTION DETAILS

Foundation: The proposed poultry houses will be constructed on an impermeable concrete foundation, to be laid by a hired subcontractor. This phase would take approximately two to four days.

Housing: The housing will be installed by a contractor and will consist of a base of 700mm concrete wall, on which the prefabricated timber housing will be secured. The structure is insulated with 4" fibreglass wool located between the timber frame studs.

Roofing: The roofing will be insulated timber construction, with box profile corrugated sheeting on 150mm x 75mm purlins on prefabricated timber trusses @ 3050mm centres.

Washing Tanks: The proposed washings tanks will be situated underground adjacent to the houses and constructed of reinforced concrete. The tank construction will conform to the Department of Agriculture, Food and Forestry's Specification No. 123 "Minimum Specification Slatted Livestock Units: Reinforced Concrete Tanks" DAFF, 1994.

Feed Silo: On completion of construction works, feed silos will be installed adjacent to the new houses with capacities of 28 tonnes each.

Ventilation: Mechanically controlled roof ventilation will be incorporated into the design of the house. The ventilation will be controlled by thermostatically controlled roof vents.

Heating: Gas heating will be installed in the new unit.

Feeding/Drinking Apparatus: An auger style feeding system and nipple-type drinkers will be installed in the new unit. Construction works are expected to take approximately 6 weeks and it is hoped to commence construction following final grant of planning permission. As construction works are expected to continue for approximately 6 weeks duration, the extra traffic and noise generated will be only temporary, and complaints are not expected from those living in and travelling through the area.

8.0 OPERATIONAL DETAILS

8.1 Introduction

The proposed poultry house's would be run by the developer, Mr Niall Mc Kenna who has been involved in the poultry industry for all his adult life.

The proposed unit would have a stocking capacity of approximately 42,000 broilers. The operation will be run exactly as with typical poultry units, which involves the rearing of chickens from day olds over a 7 week period. Western Brand Poultry will deliver day old birds to the site. There are approximately 6 batches per year, with a break between batches of approximately 2 weeks, during which cleaning of the house and yard is carried out.

8.2 Batch Cycle/House Depopulation details:

- Day 34 or 35: 30-50% of the flock is taken by Western Brand Group (to cater for customer requirements for smaller broilers)
- Day 42 – 45: remainder of flock is depopulated, depending on market requirements

Any dead birds will be stored in sealed containers and taken off site by College Proteins, Nobber, Co. Meath approximately once every two weeks, or once a week on request if necessary.

8.3 House Details:

Flooring: The flooring will be dry litter based, with wood shavings supplied by Northline Shavings, Scotstown, Co. Monaghan. The spent litter, containing poultry manure, will be scraped from the house between batches and collected by CLR Co-Op Ltd. (Refer to Appendix 2).

Cleaning: The house will be washed with water between batches, and the wash water stored in the washings tank adjacent the house. A disinfectant is used on the floor when dry, so this does not lead to any runoff. No detergents are used in the cleaning of the poultry house or yard. When the washings tank is full, the contents are siphoned out and transferred and land spread on the designated lands in the sites vicinity which are in the ownership of the applicant. (The developer has these areas mapped in accordance with his REPS plan).

8.4 Feeding and Drinking:

The proposed supplier of feed will be Corby Rock, Monaghan Town. Feed will be stored in the silos adjacent to the houses and fed down lines into the house in an auger style system. Feed wastage: as with the similar operations, feed wastage will be reduced through good practice, e.g., regular checking of the feeding lines to ensure adequate feed stock, no blockages, no contamination, etc. Water will be supplied from existing connection to Tydavnet GWS. Drinkers will be nipple style, which creates less wastage to the litter floor, with water being supplied from the mains. Drinkers will be checked regularly for leaks in the system, thus ensuring efficient and economical water consumption and minimal wastage of water.

8.5 Ventilation:

The ventilation system will consist of mechanically controlled by thermostatically controlled roof vents. The developer is aware that strict controls are essential for bird welfare – too little causes bird respiratory problems, too much causes poor litter conditions and wastes energy.

8.6 Controls:

A small control room will be situated at the front corner of the house (inside the house) where strict controls and records are maintained on relation to temperature, ventilation, lighting, and water and feed consumption, etc.

8.7 Records:

The following are some examples of records that would be kept in the control room, as with the existing houses:

- Manure Disposal Record (House no./ date / destination)
- Chemical Stock and Usage (disinfectants)
- Dispatch dockets
- Feed Delivery Record
- House Preparation Checklist
- Water Meter Readings
- Flock Inspection Sheets (daily and weekly checks, corrective actions)
- Rodent Control Record

All records concerning waste collection, recycling and recovery shall be maintained on site and be available for inspection and submitted to the Environment Section, Monaghan County Council annually.

9.0 Human Beings

9.1 Introduction

The surrounding area of the proposed development has a substantial rural pattern with agricultural activity predominant in the area. In the current context, the most significant impacts relating to human beings are further considered in the following sections Noise Emissions, Disease Control, Waste Management, Traffic ,Landscape and Material Assets.

9.2 Development Impact On Human Beings

There is an existing mushroom unit development in close proximity to the proposed new units. There is a dwelling within 100.0m of the proposed development. Letter's of consent from these occupants accompany this application. The main areas for consideration when examining the effect of human beings will be visual impact, dust, smell & noise.

9.3 Mitigation

It is considered that the increased impact on human beings will be minimal. The proposed new unit will be constructed in close proximity to an existing unit and poultry farming will maintain the current land use and practice in keeping with existing activity. Economically, the change of land use from grazing to poultry farming will only impact directly on the developer due to a reduction in the area available for cattle grazing. However, the proposed unit will serve to benefit the developer and the local economy.

Visually, the proposed development will be screened by the existing unit on site and the proposed landscaping on the area when complete. The drumlin landscape and the low site elevation will assist in blending in especially when viewed from the Knockatallan - Tydavnet road. Construction materials will also contribute to reducing visual impact and will be brown / green in colour.

At the end of the crop cycle the extract fans will be more extensively used to reduce the temperature in the poultry unit. A certain amount of duct will be discharged to atmosphere and disperse. During this phase, no buildings will be adversely affected by dust or odours. During litter transport phase, there will be a slight nuisance from odour. This will be occur in the region of 6 times annually and mitigation will be provided in the form of covered tarpaulins to contain as much of the litter dust as possible. Air quality is discussed elsewhere in this document.

9.4 Conclusion

It is proposed that the development would be carried out in full compliance with best practice procedures along with any additional restrictions/ constraints placed by the Planning Department. In keeping with best practice guidelines and relevant regulations, it is concluded that significant impacts are not expected providing that all mitigation measures are adapted and properly implemented.

10.0 EMMISSIONS TO ATMOSPHERE

10.1 Dust:

Dust levels generated by the development, both in the construction and operational phase, would be negligible. Thorough cleaning of the houses between batches will ensure that the emission of dust will not be an issue. An adequate ventilation system employed in the houses will ensure no nuisance of dust within the houses. Minimal levels of dust will be generated, as is to be expected, during the construction phase. Such dust will only be evident on the site and will not impact on dwellings and other buildings in the vicinity of the site, which are situated far enough from the operation so as not to be effected by any dust generated. Regular washing of the yard areas and periodic rainfall will also mitigate any dispersal of dust generated by site traffic. Dust monitoring should be carried out on a visual basis and mitigation measures employed if deemed necessary.

10.2 Odour:

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 agricultural developments and the poultry unit to the north of the proposed development. This in mind however, odour levels generated do not cause significant nuisance in the surrounding area, as the operation is located in a predominately agricultural area and over 450m distance from any dwellings other than the developer's.

The poultry houses will be cleaned out between batches, approximately 6 times per year, and the cleared out litter and manure taken away by CLR Co-Op Ltd, Mountlouise, Smithborough, Co. Monaghan. Wash water from the cleaning of the house will be stored in an underground tank at the end of the house, which is adequately covered and certified by an engineer. Additionally, as the manure is scraped out of the houses with the litter between batches, the level of manure in the wash will be negligible.

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 the site
- Thorough cleaning out of the poultry house between batches
- Regular yard cleaning
- Strict adherence to good land spreading practice

Such measures will be taken by the developer in an effort to ensure the proposed poultry houses do not cause a nuisance in the surrounding area.

11.0 FLORA AND FAUNA

11.1 Introduction

Currently the site of the proposed development is a Greenfield site adjacent to the existing unit. It is used periodically for grazing. Hedges and trees surround the existing house and site of the proposed house. The entrance to be used in the proposed development is the existing entrance to the site. Some levelling off of ground levels will be required to facilitate the new development and the developer will cooperate with any conditions specified by the Local Authority in relation to this.

Stringent cleaning procedures, proper storage, disposal and transfer of wash water, and efficient site drainage will ensure the surrounding flora and fauna will not be adversely effected.

The nearest watercourse to the development is the River Blackwater which is located , 25.0m to the rear of the development. The proposed development is not situated within ASSI (Area Of Scientific Interest), so will therefore not impact on any rare flora or fauna.

11.2 Rodent Control Programme:

The procedure for pest control for the proposed development is a vital element of the management of the development. The system is a Bord Bia bait programme which will be enforced by the developer. The developer will set bait at various strategic locations around the new houses and maintain a weekly check and associated records. A map outlining the locations and numbers of baiting stations will be drawn up. A "Baiting Checklist" will be kept, recording details of Bait Station number, comments, actions and date. Recorded checks will be carried out on a weekly basis and ameliorative action taken when/if necessary.

12.0 ARCHAEOLOGY

Various maps and the Monaghan County Development Plan were consulted in order to identify any areas of archaeological significance. No areas or monuments of archaeological and historical potential were identified within the confines of the development.

13.0 NOISE EMISSIONS

It is inevitable that a certain noise element would be a factor of such an operation. Noise will be generated in the construction and operational phases. Farm sites such as this whereupon this development is proposed which operate above the threshold requirements of the EPA are required to comply with conditions which stipulate that operating noise levels should not be exceeded at noise sensitive locations surrounding the site. The following sound pressure limits are set down by the EPA:-

Daytime: 55dB(A) (LAeq(1h)

Night time: 45dB(A) (LAeq(1h)

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

13.1 Construction Noise:

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 houses

Considering the foundation laying phase will take approximately 3-4 days and then after a few weeks the installation of housing associated works should only take approximately 2-3 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.

13.2 Operational Noise:

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

Again, mitigation of operational noise would involve operation during normal daytime working hours. Also, poultry house doors 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 existing agriculture and associated activity in the vicinity.

13.3 Summary Of Potential Interaction / Inter Relationships

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

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.

Summary of Potential Interactions/Inter-relationships

SUBJECT	Interaction with	Interaction/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 its impact on the communities and residents adjacent to the poultry housing will be the main issue.
	Flora & Fauna	Vegetation can act as a purifier for air in absorbing CO2 and giving out oxygen. Dust could affect fauna 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
	Climate	Local heating of air in the poultry houses of embankments 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 & 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 and these are very important as wildlife corridors for animals. Improvement of the remaining hedgerow will be conducted post development
	Water	No Interaction/Inter-relationships
	Soils	Movement of significant quantities of soil from one area of another can affect the appearance of the landscape. This will be necessary as part of the construction when material is removed from the construction zone.
	Material Assets	No interactions/Inter-relationships
Flora & 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 need special precautions to avoid disturbance of sediments with consequent effects on fauna.
	Soils	Stabilisation methods for soft soil area 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
Water	Human Beings	No Interactions/Inter-relationships
	Soils	Rainfall runoff waters could cause deterioration of water quality of streams
	Material Assets	No Interactions/inter-relationships
Soils	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.
Climate	Human Beings	No interactions/Inter-relationships
	Material Assets	No Interactions/Inter-relationships
Material Assets	Human Beings	Current land-use will be permanently altered including the loss of ecological habitat and farmland.

13.4 Operational Noise:

13.4.1 Existing Sources of Air Emissions

The existing development is located c. 10.0 km north west of the county town Of Monaghan and c.4.5kw north of the village of Scotstown, Co Monaghan. The main source of air pollution would arise from domestic fuel combustion. Emissions from oil combustion include mainly carbon monoxide, nitrogen oxides, sulphur dioxide and particulates as well as greenhouse gases. This facility with its existing poultry houses has an existing impact to air quality as a result of emissions from combustion of LPG to heat the houses.

13.4.2 IMPACTS

Dust :-

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

13.4.2

Odour :-

Odour minimisation is to be kept to the absolute minimum even though the poultry site is within 100.0m from the nearest neighbours dwelling and 200.0m of the applicants own dwelling.

13.4.3 MITIGATION MEASURES Dusting

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

13.4.4 Odour

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

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

(ii) The litter from the operation is removed from the houses and loaded onto the articulated trailers for instant removal by CLR Co-Op Ltd. This is a same day activity. Power hosing Contractors arrive on site on same day as litter is removed and they begin a strict washing programme and disinfectant programme.

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

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

(v) Washings from cleaning of poultry houses are kept in underground storage tank.

(vi) Water minimisation is kept to a minimum due to the cost of pumping water to wash

houses. Approximately 100 gallons are used to clean houses.

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.

14.0 DISEASE CONTROL

Strict disease control procedures will be applied in the proposed development. Laws, Codes of Practice and Regulations regarding disease control are administered by the Department of Agriculture, Fisheries and Food under various EU directives. Stringent in-house procedures, monitoring and adherence to guidelines from Western Brand, Agrihealth Ltd [Veterinary Services] and Bord Bia ensure every effort is made to minimise the risk of disease outbreak. Also, the developer is familiar with the protocol in the event of a disease outbreak from his background in the agriculture industry. The Western Brand Group provides developers with a Code of Practice outlining various bio security guidelines, to ensure contamination is not brought to or from the operation – for example, details of vaccination, general hygiene, dead chickens, pest control, cleaning out and litter disposal. The applicant will also be required to consult guidelines in relation to the use of disinfectant foot dip and cleaning agents, visitor restrictions, use of protective clothing, bird and catcher hygiene measures.

Agrihealth Ltd, Clones Road, Monaghan, works closely with the developer to minimise health risk to the flocks and provides procedures to be followed in the event of compromised health/welfare of the flock. They also provide a Health and Hygiene Programme involving guidelines on good practice in relation to Feeding, Catching, Culling, Ventilation and Temperature Control as well as guidelines on site bio security. Also provided is a "Terminal Hygiene Programme" and associated checklist to follow in the event of a disease outbreak, as part of a Bio security Programme. The development will be assigned its own Veterinary Adviser. The developer will also be required to consult "Chicken Quality Assurance Scheme - Code of Practice for Chicken Producers", Teagasc guidelines on Farm Safety and Disease Prevention and HACCP Principles for Poultry Farm Safety. Operational controls to reduce the risk of disease outbreak include.....

- Temperature Control: The temperature inside the house is strictly controlled, as it must be varied according to the stage of the birds' life cycle
- Ventilation checks and control
- Regular inspection of Feedlines and Drinkers
- Regular inspection of Appearance of Birds
- Regular inspection of Litter condition
- Strict visitor control- including the use of a visitor book, adequate protective clothing and footwear, disinfectant foot dip and hand wash where necessary.
- Rodent Control Programme- as described on the Flora and Fauna Section.

Strict feeding and drinking rituals are adhered to, and the condition of the birds is inspected at various intervals on a daily basis. Dead birds are stored in sealed containers and will be taken by College Proteins, Nobber, Co. Meath. The developer reports anything suspicious to Western Brand Group and Agrihealth Ltd, who send a vet to inspect the situation. The Department Veterinary Office is notified immediately of any matters arising, and all incidents are logged by the developer. In the event of a Class A disease outbreak, the Department of Agriculture takes control of the site and associated surrounding lands and makes subsequent decisions regarding the future of the development, all determined by the extent of the outbreak.

In conclusion, given the stringent controls, procedures and checks proposed and regulated for this type of development, the new development would be adequately prepared for any disease outbreak among the flock.

15.0 WASTE MANAGMENT

15.1 Introduction

The applicant, Mr. Niall Mc Kenna recognises the importance of good waste management practices in the operation of a modern agricultural activity and is committed to operating in an environmentally responsible manner and consequently views waste as a resource to be used and not a by-product to be discarded. Operational practices on the proposed development and the design of the development are aimed at minimising wastes to landfill and the potential for pollution of surrounding land, water or air arising from the development in line with current legislation. The waste management issues within the proposed development will be controlled at all stages of its life cycle i.e. design, construction, operation and decommissioning.

15.2 Avoidance, Remedial or Reductive Measures

The new poultry units will be operated by the developer within the management system utilised by Western Brand Group, Ballyhaunis, Co. Mayo, for whom the developer will rear the poultry flock. Methods utilised include....

- Waste management & minimisation
- Energy efficiency
- Water conservation (efficient usage in an effort to minimise waste of the resource)
- Effluent and emission minimisation
- Purchasing decisions

15.3 Waste Management & Minimisation

Waste management has been examined during two distinct phases of the development....

- Construction phase, and
- Operational phase

Both phases of the development require adequate management to minimise waste generation and protect the surrounding environment from damage and ensure the success of the development.

15.4 Construction Phase

It is anticipated that the principle sources of waste arising during the construction of the proposed development will be.....

- Storage and disposal of spoil
- Storage and construction materials on site
- Reuse and recycling of materials
- Disposal of waste construction material, spare materials and containers

Potential environmental impacts arising from the construction stage can include.....

- Pollution from stored material run-off
- Problems arising from residual wastes
- Fuel/oil leakages from construction equipment

15.5 Operational phase

During the operational phase of the development anticipated sources of waste from the operation of the development are.....

- Possible contamination of the surrounding environment arising from inappropriate
- waste management
- Accidental spillages of fuels/chemicals
- Additional road traffic emissions associated with additional traffic volumes arising
- from the operation of the development
- Waste feed/litter from each batch housed within the units
- Liquid waste arising from the housing of each batch within the units
- Flock fatalities

15.6 Dead Stock

A twice-daily inspection will be carried out within the poultry house to remove the carcases of any dead birds. These will be removed from the area inhabited by flock to a storage container (wheelie bin of 240 litre capacity), there will be two bins commissioned for the new houses. These containers will be emptied by College Proteins, Nobber, Co. Meath approximately every three weeks, or as required, to a dedicated rendering plant which they operate in Nobber, Co. Meath, for processing.

15.7 Spent Poultry Litter

It is proposed that dry litter will be used within the proposed poultry unit. The type of feed proposed to be utilised, which will be supplied by Corby Rock Mill, Monaghan Town, is engineered to reduce phosphate and nitrate levels within the excreta produced by the flocks being reared to reduce the nutrients contained within the waste to be disposed. At the end of each 8 week farming cycle when the entire stock has been removed, the combined poultry litter and manure are removed by CLR Co-Op Ltd, Mountlouise, Smithborough, Co. Monaghan (See Appendix 2).

15.8 Decommissioning

Upon future cessation of use, each unit will be cleaned and sterilised as is the procedure prior to the introduction of a new flock of birds. Once the structures have been sterilised, they will be taken down and the various components made available for reuse or recycling where possible.

15.9 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.

15.9.1 CONSTRUCTION IMPACTS AND MITIGATION Impacts :-

Loss or alteration of habitats and species - There will be a minor loss of improved grassland habitats and species as a consequence of the expansion of the site.

Increased suspended solids :-

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

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.

Mitigation:-

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

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.

MONITORING :-

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

15.10 Conclusion

Due to the efficient running of this type of development in terms of strict monitoring, inspection and record keeping associated with the wastes, together with strong awareness of all persons involved in construction and operation of the potential impacts on the surrounding environment, the quantities of waste generated will be kept to a minimum, dealt with appropriately in terms of storage and disposal. All wastes arising will be tightly monitored at all stages of the development and transferred to suitably permitted waste contractors for disposal or treatment, no wastes will be burned or buried on the developers site. Hence, in terms of wastes generated by the development, the associated environmental burden is expected to be minimal.

16.0 WATER

16.1 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 "drumlin style" topography in County Monaghan has 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 agricultural 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 agricultural unit on site to this principle.

16.2 Geological setting

The site overlies a Formation of Dinantian Pure Bedded Limestones (DPBL) as identified in the GSI National Draft Generalised Bedrock map in appendix 3. The County Monaghan Groundwater Protection Scheme classifies the aquifer potential of this area as being "LK – Locally Important Aquifer – Karstified, which Is Generally Unproductive Except For Local Zones". The till soil is described as "Till

derived chiefly from mixed Devonian and Carboniferous rocks" (TDCSsS). Vulnerability in this area is Moderate (M).

Surface Water Bodies :-

The river Blackwater traverses the rear of the site and will be within 25.0m of the proposed development at the nearest point. All surface / roof water will be diverted through a polishing filter prior to final discharge to groundwater.

16.3 Impacts and Remedial actions

It is proposed to supply the development with water from an existing connection to Tydavnet GWS which is already on site. A dry litter bedding system is proposed for the new unit, in an effort to minimise the generation of liquid wastes from the operation. The water supply to the flocks will be via a nipple drinker system within each poultry house, which provides water as required and minimises losses to the floor. The principle source of liquid waste arising within the development will be wash water generated at the end of each batch cycle when the house is being cleaned in preparation for the arrival of the next stock batch. The wash water generated from the poultry units on site will be stored in 2 No. new underground, certified re-enforced storage tanks with a capacity of 10,000 litres each. Water from the washings tanks will be used in land spreading activities in accordance with the applicants REPS scheme.

All land spreading activities will be carried out in accordance with the relevant directives and guidelines, especially the Department of Environment's Code of Practice for Farming. The developer will thus avoid spreading activities during prolonged wet spells and frost while also paying particular attention to recommended buffer zones. Surface water run-off arising from the development will also be diverted to the proposed surface water drainage network.

16.4 Conclusion

The aquifer, on which the site is located, is a poor one and is classified as being of moderate vulnerability. Taken into consideration along with the adequate soil cover, setback from the peat areas, sound concrete foundations, strict monitoring of the operation at all stages and the unlikelihood of point or diffuse source pollution from the development, no adverse effect to local groundwater/aquatic environment or local water amenity value is envisaged.

17.0 SOIL

17.1 Introduction

The till soil is described as "Till derived chiefly from mixed Devonian and Carboniferous rocks" (TDCSsS). Vulnerability in this area is Moderate (M). Specific subsoil regions are indicated on the GSI subsoil's classification map included in Appendix 3.

17.2 Operation

The proposed development will be operated on an impermeable concrete base with sufficient storm water drainage system, and will use a dry litter system of bedding and provide storage facilities for wash waters. The dry litter waste arising on site is removed from the development by CLR Co-Op Ltd. The wash waters stored on site are land spread on lands in the ownership of the developer as per REPS scheme. Soil samples are collected annually and analysed by Teagasc to determine the nutrient content of the soil and determine the fertilising programme for the following year, if required.

17.3 Conclusion

It is not envisaged that the proposed development will adversely affect the soils in the area, due to the strictly controlled nature of the operation. Land spreading will be carried out in a strictly controlled manner, adhering to the REPS programme, Codes of Practice and other guidelines.

18.0 TRAFFIC

18.1 Introduction

The proposed development will be constructed at IGR [Irish Grid Reference] X - 259963.324, Y - 341145.393. The existing development is located c. 10.0 km north west of the county town Of Monaghan and c.4.5kw north of the village of Scotstown, Co Monaghan. The applicants own dwelling is approximately 200 meters to the north west. There are two dwellings located within 100m of the proposed development and letters of consent from both owners accompany this application.
Approximately 32m to the north lies a Local road (L 1000) which connects Knockatallan & Tydavnet.

The area is a predominantly rural farmland and the current complex of 1 no. poultry unit holds 20,000 birds in total. The nearest habitable dwelling is circa <100m To the North West of the proposed development.

The area is a rural farmland area. The local area supports a well established farming community; with most of the land in the vicinity of the site being used for agricultural purposes (grazing, land spreading). The traffic impacts associated with this nature of development are assessed in terms of issues surrounding both the construction and operational stages of the project.

18.2 Construction phase

The construction phase of the proposed development is predicted to be completed within a 4 to 6 week frame. The first few days will contribute to heaviest traffic flows of the construction phase-with approximately forty lorry trips to and from the site (mainly the delivery of stones, concrete, and other building materials) as well as earth-moving equipment to carry out ground works. The building contractors working on site will also contribute to the daily vehicular traffic. After the foundation is laid there would be nothing happening for a few weeks and then the house would be installed. The installation of the houses would involve a single 40ft lorry to deliver the prefabricated structure, therefore generating four lorry trips at this stage.

18.3 Operational Phase

There will be limited traffic directly and indirectly resulting from the operation of the proposed development. The developer and his family will staff the development, which will not result in additional traffic volumes which are directly associated with the employment of additional labour for day-to-day site operations. The main traffic sources associated with the development will be the delivery of hatchlings to the unit for rearing, the transport of reared birds to processing plants, the delivery of feed, the removal of carcasses, the delivery of litter material and the removal of spent litter material.

In relation to the delivery of hatchlings / day olds, the proposed unit will result in 1 No delivery, as there will be capacity on the single 20ft lorry to deliver the required number of hatchlings. As regards the transport of reared birds, it is expected to generate approximately 24 lorry trips per batch upon commissioning of 1 No units. This part of the operation leads to the highest generation of traffic and is to be expected for this type of enterprise. Feed will be delivered to the silos on site by Kolbe Feeds approximately 10 times per batch (30 tonnes per delivery). It should also be noted that these vehicles are often passing through the local road network to service other sites in the area, so the area is accustomed to such traffic. The need for removal of a larger quantity of bird carcasses upon commissioning of 1 No. additional poultry houses is expected to generate 1 No collection per week. College Proteins will remove these carcasses approximately every week. The requirement for delivery of shavings (litter material) will generate 1 No. forty foot lorry trip per batch. It is expected that the removal of spent litter for the proposed houses would generate 2 No. forty foot lorry trip per batch. Occasional visits by veterinarian inspectors (annually), An Bord Bia staff (annually) and Carton Group inspectors (approx. twice per batch, twelve visits per year) are made during the course of the operational year. It is important to note that all these visitors to the site, from delivery of hatchlings / day olds to visits by inspectors are already visiting various poultry operations in this region. The assumption that several sites are visited on one journey suggests the unlikelihood of additional poultry houses on the region adding significant increased traffic.

18.4 Conclusion

The proposed development will generate minimal extra road traffic in the area due to similar developments in the greater vicinity. The site is in close proximity to an already highly utilised regional road. This road is relatively important road used by vehicles involved in deliveries to and collections from other agricultural activities in the Region. The proposed development is therefore not predicted to give rise to significant additional traffic volumes on the surrounding National, Regional or local road networks.

19.0 LANDSCAPE

The site of the proposed development and its peripheries are rural and agricultural with most of the surrounding lands being employed in agricultural enterprises. The site is nestled within the rolling drumlin style hills of Monaghan and due to this and also a combination of trees and hedgerow-

existing and proposed- visibility of the complex will be relatively minimal from the approaching country road or any other road in the district. Efforts will be made by the applicant to further obscure the complex from the surrounding environment, if necessary, by the installation of further hedgerow, native trees, fencing or a soil embankment. A landscape plan has been submitted as part of this application. Due to the low density dwellings in the vicinity the proposed development poses minimal visible impact.

Therefore the proposed development will not severely impact on the landscape of the area and will blend with the existing agricultural development on site.

20.0 MATERIAL ASSETS

The immediate area is predominately a farming area. With the exception of the minor predicted increase in traffic levels during the construction and operational stages of the development, no further adverse impact on the local community is envisaged, and consequently the development should not adversely impact upon the material assets within the local area.

21.0 CLIMATE

The power requirement of the proposed development will be met by electricity supplied from the National Grid. Additional supply can be facilitated by the existing grid in close proximity to the site. Arrangements are in place however for ensuring energy requirements are met during interruptions in supply from the National Grid, an automatic generator system is already employed as an emergency backup system on site. The proposed development will not require a major draw down of power from the National Grid to function, resultantly not being the cause of large volumes of greenhouse gases being generated. However, the developer will ensure efficient energy use at all times, and will work to prevent wasteful consumption of energy on site. The proposed development will therefore not have an influence on the local or national climate.

22.0 TRANSBOUNDARY IMPACTS

Under Section (174) of the 2000 Planning & Development Act, where the site's location is close to Northern Ireland (or any other jurisdiction outside the state) and the development is likely to affect an adjoining member state of the E.U., there is an indication for a need to formally submit the application for observations to the relevant authorities in respect of any transfrontier environmental impacts identified. Notwithstanding the proximity of the site to the border, 7.0 km approx at its nearest point, it is considered that the development will have a minimal impact on the frontier area. Northern Ireland company Moy Park is the biggest poultry producer on the island of Ireland by some distance. The firm processes twice as many birds each week at its plant in Dungannon in Co Tyrone, as their main competitors. Due to the small nature of the development within the Carton Group and existing competition in Northern Ireland, the operational activity will have no measurable effects on the frontier area.

It is considered that the majority of traffic accessing the site will enter the site from the Republic of Ireland road network. It is envisaged however that limited traffic, partly dependent on as yet

undetermined suppliers and contractors, may access the site via Monaghan Town and thus the Northern Ireland road network.

Notwithstanding this, the transfrontier impact is deemed insignificant and it would be considered that there are no grounds to make reference to the Northern Ireland authorities in this matter as would be normally required under Section (174) of the 2000 Planning & Development of the Act where such effects are likely to prove measurable.

23.0 Forecasting & 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. Forecasting was carried out using the following headings.

23.1 Land and Soil

This is a brown field site within an existing farm holding in the ownership of Mr. Liam Mc Cague. No other intense similar developments are located in close proximity. As such, it is considered that there will be no significant impact on land or soils.

23.2 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 minimal / no impact on the existing road network.

23.3 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.

23.4 Construction of the poultry House

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

23.5 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.

23.6 RESIDUAL IMPACTS.

No residual impacts are predicted.

23.7 Difficulties Encountered While Compiling Report

There were no significant time delays or difficulties encountered during the compilation of the EIS.

24.0 CONCLUSION OF REPORT

Following the examination of the processes and associated issues involved with the nature of the proposed development, no significant adverse impacts or areas of concern are predicted as arising during the construction or operational phases of the development.

Where real impacts are identified, mitigation measures will be put in place to reduce insofar as possible.

Given that the existence of agricultural activity and associated industry in the vicinity by the developers, it is proposed that the development of a poultry unit will have limited effects on the surrounding environment.

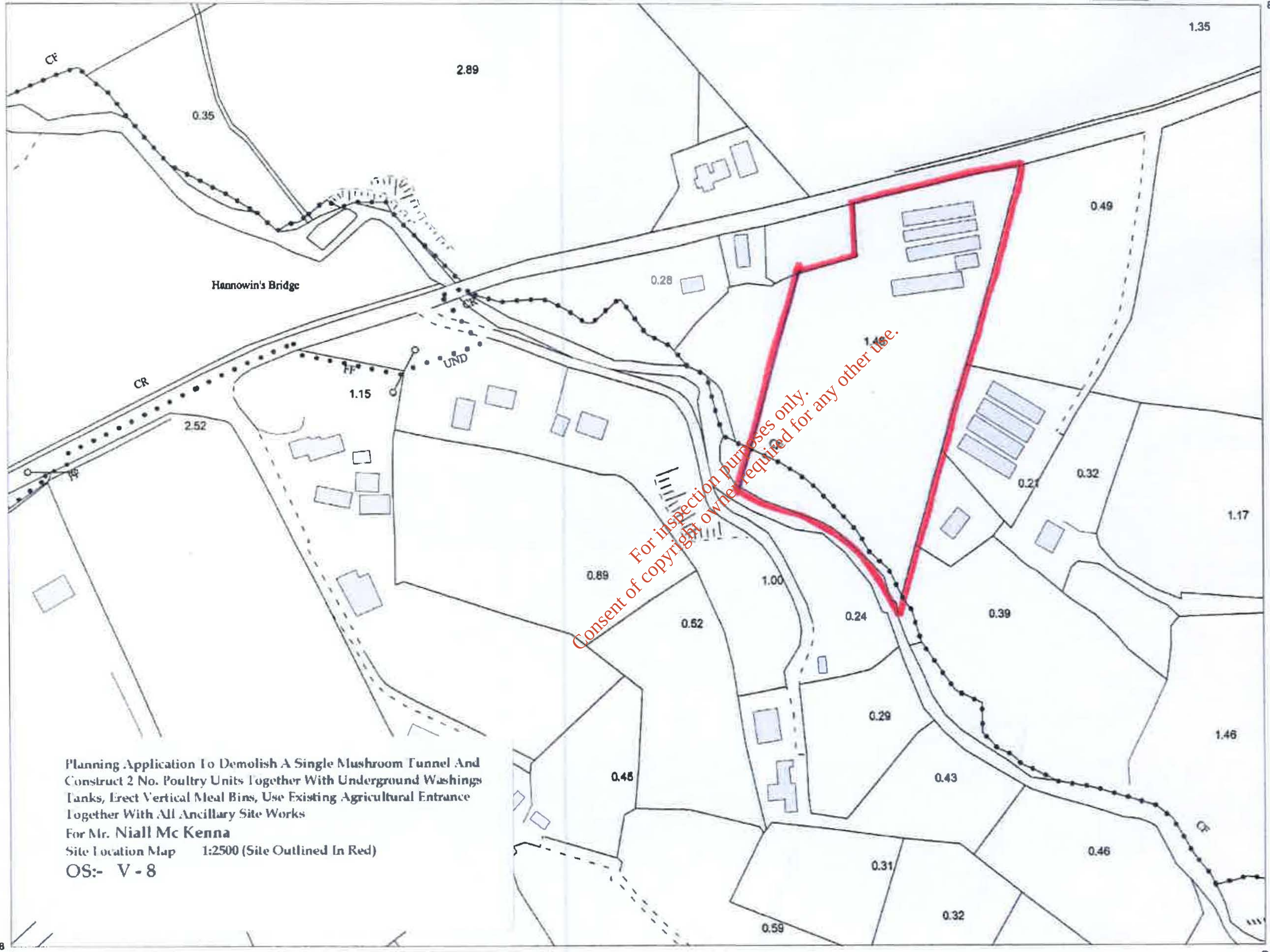
Appendix No. 1

Maps.....

- OS Map 1:2500
- Site Layout Plan A3 (NTS)
- Poultry House Plans

Surveyed 2000
Revised 2011
Levelled

Rural PLACE Map



ITM CENTRE PT. COORDS

659756,841033

DESCRIPTION

MAP SHEETS

Digital Map
0920 0919

Authorised Internet Map

N

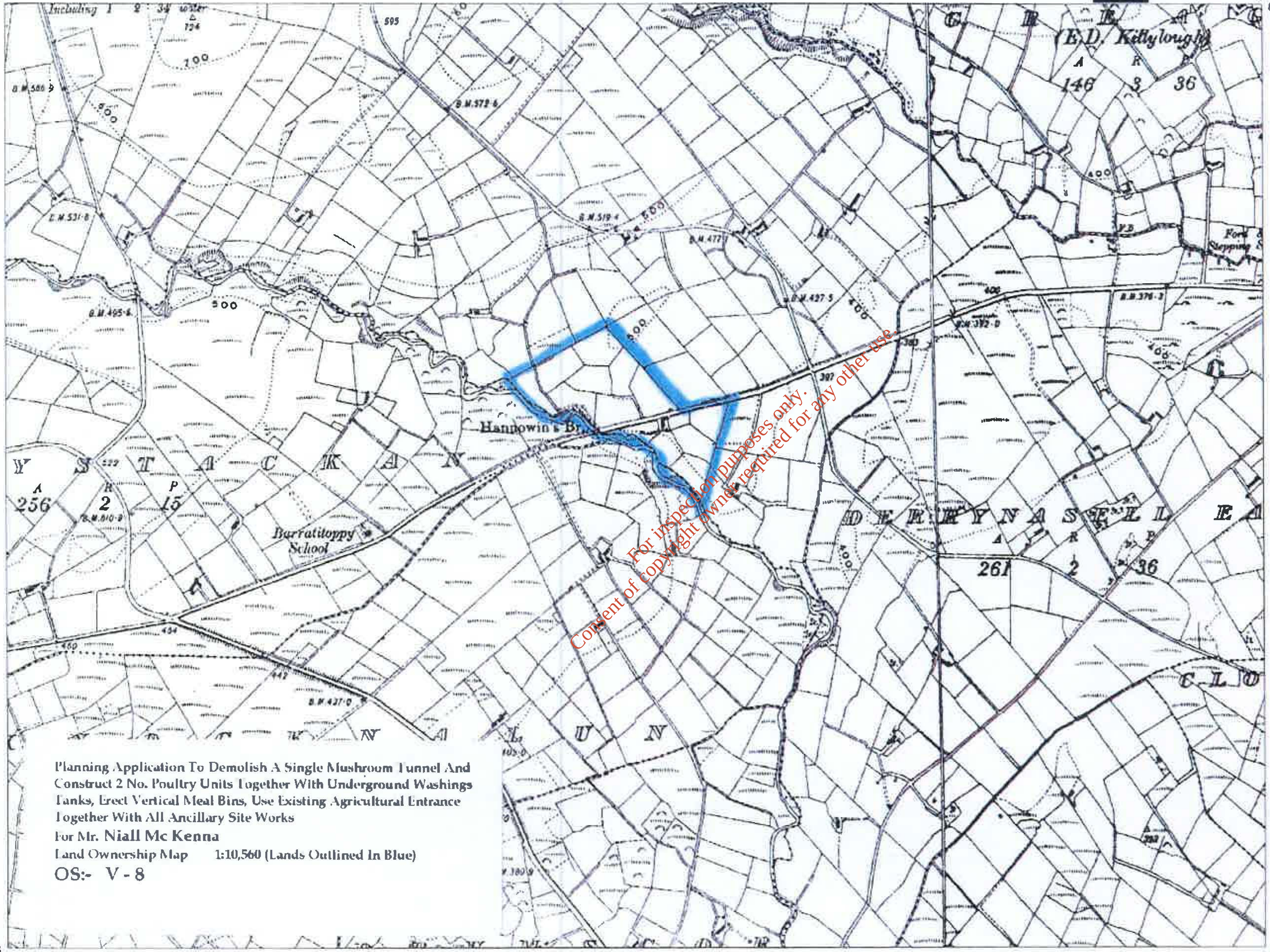
Scale:- 1:2,500
Scála:- 1:2,500

0 50 100 150 200 250 Metres
0 100 200 300 400 500 Feet

Plot Ref. No. 19667064_1_1
Plot Date 15-SEP-2014

Surveyed 1835
Revised 1907
Levelled

Record PLACE Map



Planning Application To Demolish A Single Mushroom Tunnel And Construct 2 No. Poultry Units Together With Underground Washings Tanks, Erect Vertical Meal Bins, Use Existing Agricultural Entrance Together With All Ancillary Site Works

For Mr. Niall Mc Kenna

Land Ownership Map 1:10,560 (Lands Outlined In Blue)

OS:- V - 8

ITM CENTRE PT COORDS

659756,841033

DESCRIPTION

MAP SHEETS

6 Inch

MN005 MN006

Authorised Internet Map

Compiled and published by Ordnance Survey Ireland, Phoenix Park, Dublin 8, Ireland.

The representation on this map of a road, track or footpath is not evidence of the existence of a right of way.

Ordnance Survey maps never show legal property boundaries, nor do they show ownership of physical features.

N

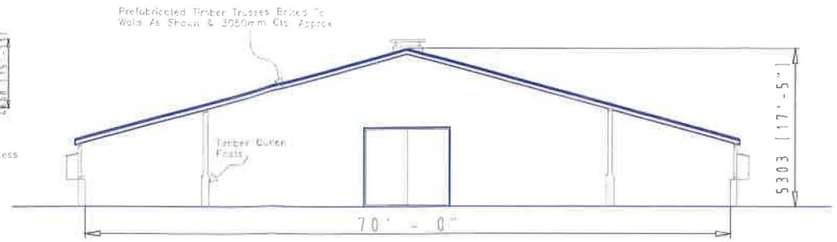
Scale:- 1:10,560
Scála:- 1:10,560

0 200 400 600 800 1,000 Metres
0 500 1,000 1,500 2,000 2,500 Feet

Plot Ref. No. 19667064_1
Plot Date 15-SEP-2014

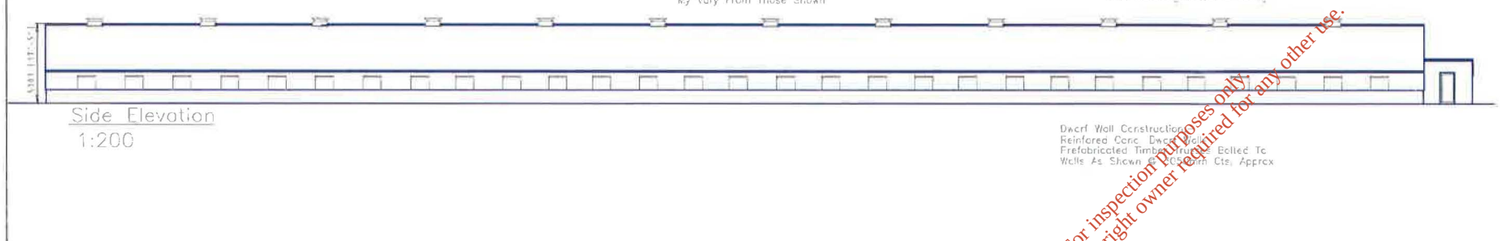
FILE REF :- File Ref

Floor Plan
1:200



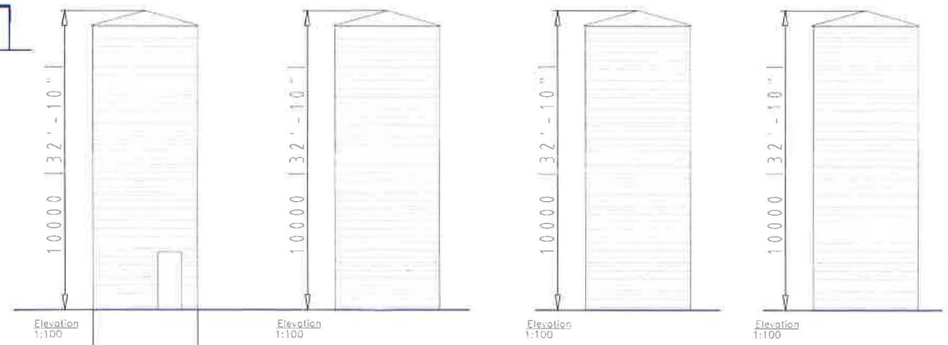
Section A-A
1:100

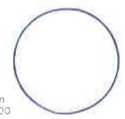
Floor Construction:-
150mm Reinforced Conc. Floor Slab
Laid To Falls On
Min. 150mm Well Compacted Hardcore



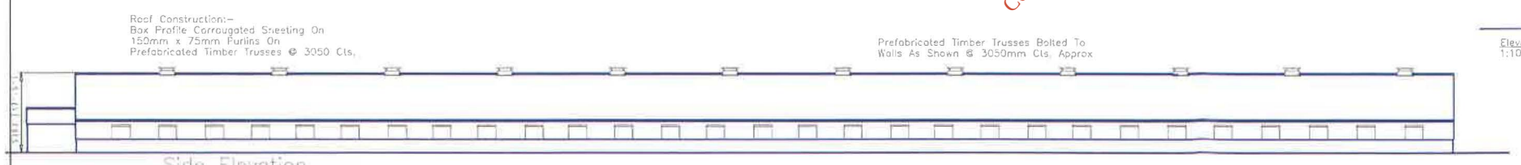
Side Elevation
1:200

Dwarf Wall Construction:-
Reinforced Conc. Dwarf Wall
Prefabricated Timber Trusses Bolted To
Walls As Shown @ 3050mm Cts. Approx

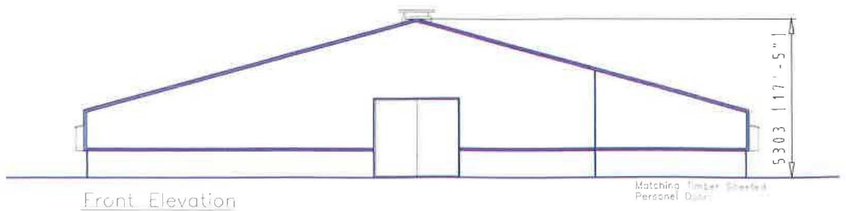




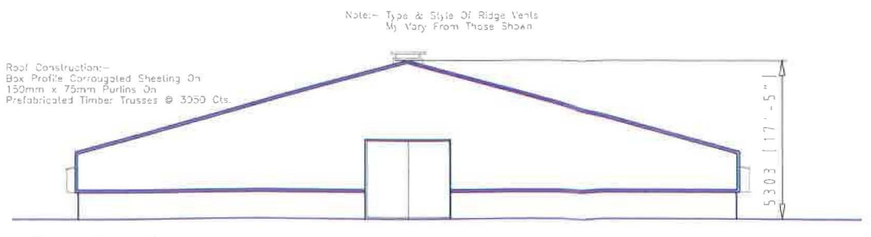
Meal Bin Details
1:100
28 Tonne Split Bin With Slide



Side Elevation
1:200



Front Elevation
1:100



Rear Elevation
1:100

REVISIONS:-

PROJECT

PROPOSED NEW POULTRY UNITS AT KNOCKBALLYRONY TD., SCOTSTOWN, FOR MR. NIALL MC KENNA (BOTH UNITS IDENTICAL)

DRAWING:- Planning Drawing Only SCALE:- As Shown DATE:- November 2014 DRAWN BY:- JB CHECKED BY:- JB DRAWING NO.:- 170714 - 01

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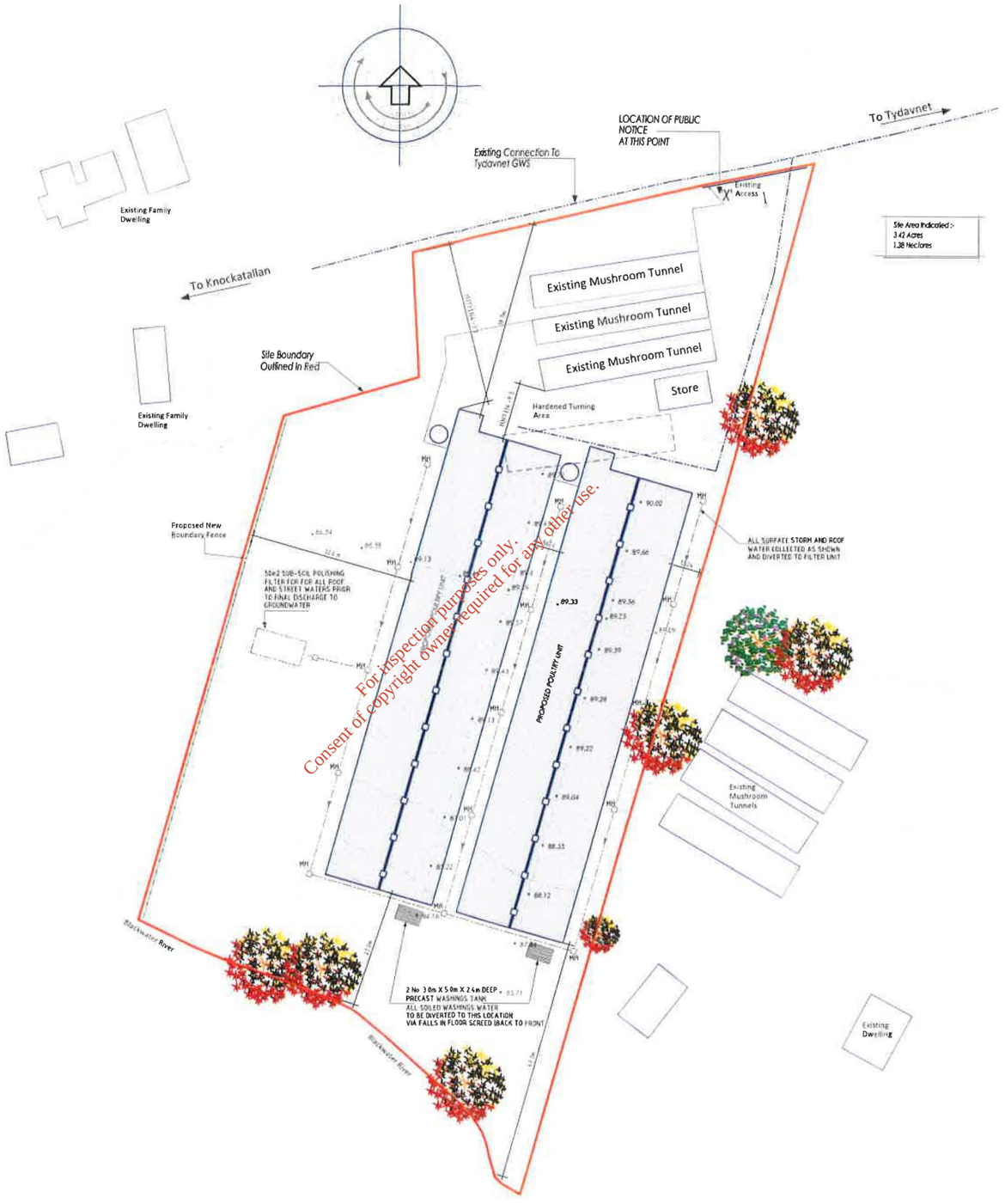
FILE REF :- File Pef

Site Layout Plan

Knockballyroney Td., Scotstown
O.S. REF. V - 8
SCALE : 1:500
Proposed Development For Niall Mc Kenna



REVISIONS:-

PROJECT

PROPOSED NEW POULTRY UNITS AT KNOCKBALLYRONY TD., SCOTSTOWN, FOR MR. NIALL MC KENNA (BOTH UNITS IDENTICAL)

DRAWING:- Landscape Plan SCALE:- 1500 DATE:- November 2014 DRAWN BY:- JB CHECKED BY:- JB DRAWING NO.:- 170714 - 02

Joe Beggan
B.Sc.(Hons)Eng., Arch.Tech., MCIOB
CLONKIRK CLONES, CO. MONAGHAN.
PH : 047-51847 / 087-32924047
E-MAIL : joebeggan@eircom.net

Appendix No. 2

Letters.....

- **CLR Co-Op Ltd. Confirmation Of Removal Of Litter**
- **College Proteins – Confirmation Of removal Of Casualty Birds**

C.L.R. Co-op Ltd
T/A Poultry Manure Supplies, c/o Mount Louise,
Smithboro, Co. Monaghan.
Tel: 047 89492 Mobile: 086 2508610

TO WHOM IT MAY CONCERN

01/10/14

CLR Co op will be collecting the poultry manure of

Mr Niall McKenna
Knockballyroney
Scotstown .
Co Monaghan.

And deliver it to the following compost yards

The Kabeyun facility Castleshane, Co Monaghan (W0121-01)
Carbury Compost, Derrinturn, Carbury, Co Kildare.(W0124-010)
And Custom Compost, Ballyminaun Hill, Gorey , Co Wexford.(123-1).

CLR Co op is registered with the Department of Agriculture, Food and The Marine for the transport of poultry manure ,DAFM Reference No CLR. All necessary paperwork is and will be maintained, including an annual Record 3 form submitted to the Departement of Agriculture, Food and Marine. Poultry Litter is in considerable demand at present from the mushroom industry.

James O'Harte
General Manager

FORM A

APPLICATION FOR ORDINARY SHARES BY AN INDIVIDUAL

I THE UNDER SIGNED APPLY TO Chicken Litter Recycling Co-operative Society Limited for an initial call of Two Hundred Ordinary Transferable One Euro Shares and agree to meet five further calls of fifty cent per ton of all litter removed.

Signature of Applicant Niall Mc Keown **Witness** [signature]

Address KNOCKBALLYROHEY **Date** 1/10/14

SCOTSTOWN

CO MONAGHAN

College Proteins Group

College Proteins

College Road, Nobber, Co. Meath, Ireland.
Tel: + 353(0)46 909 6000 Fax: + 353(0)46 905 2062 / 905 2465
Website: www.collegeproteins.ie Email: info@collegeproteins.ie

Planning Department,
Monaghan County Council,
The Glen,
Monaghan,
Co. Monaghan.

03th October 2014

To Whom It May Concern:

We wish to confirm that Mr.Niall Mc Kenna, Knockballyromey, Scotstown, Co. Monaghan is currently not on our list of customers for collection, however we would be available to collect from him on a regular basis should he wish to open an account with us. The poultry would be contained in 240 litre or 660 litre wheelie bins. Our plant at Nobber, which was custom built on a green field site in 1989 is fully equipped with a modern effluent system, which is regularly monitored by the E.P.A. under IPC licence no. P0037-03. We pride ourselves on having a good reputation in the Rendering Industry, and we have been certified under EU Directive 1069/2009, which governs the industry.

If you require any further assistance, please do not hesitate to contact me.

Yours faithfully,

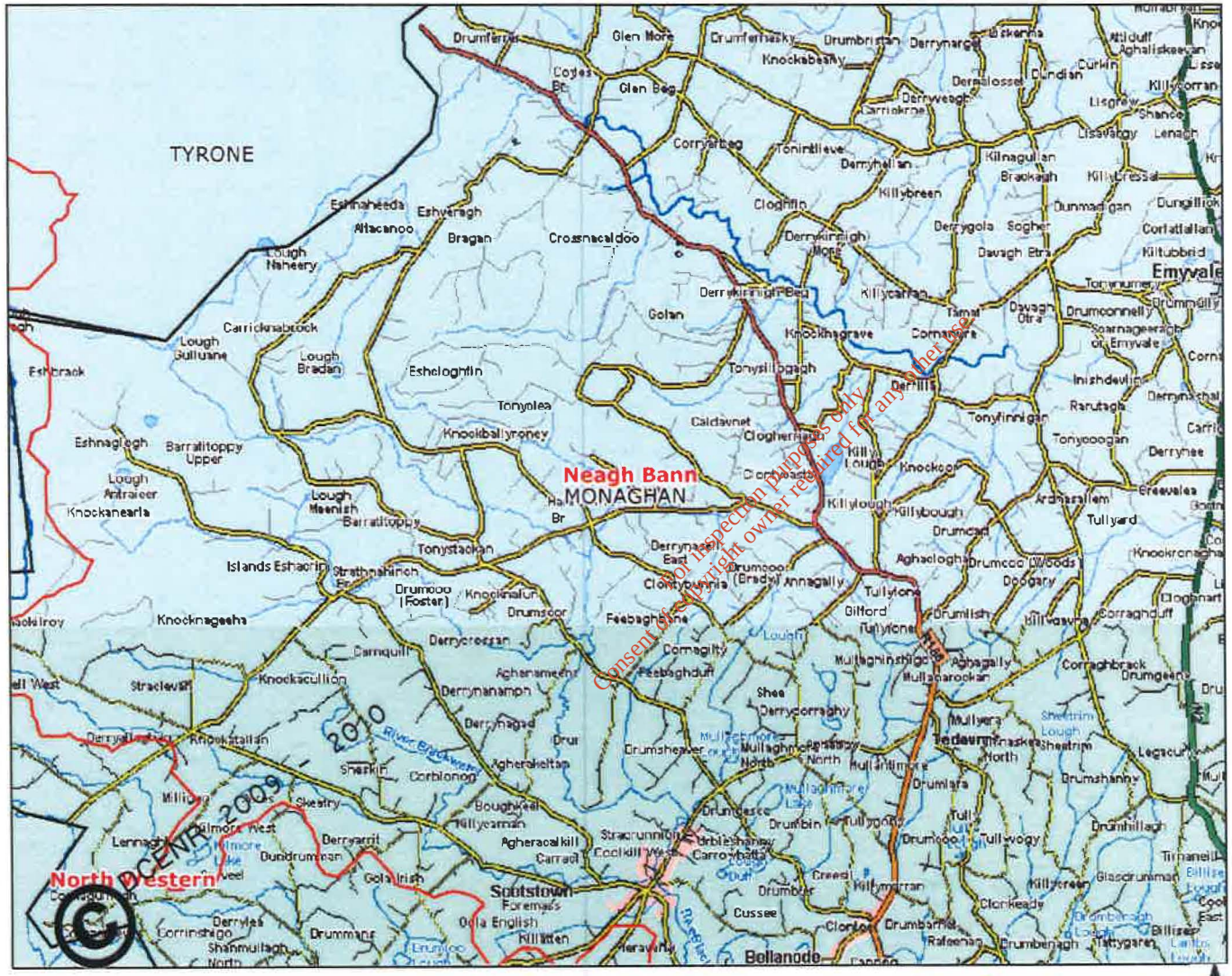
Ita Brady
Transport Manager

Appendix No. 3

GSI Maps.....

- EPA Source Protection
- National Draft Bedrock Aquifer Map
- National Draft Generalised Bedrock Map
- National Vulnerability Map
- Wells Accuracy map
- Teagasc Subsoils Map

Niall Mc Kenna - EPA Source Protection Area



0 2 4 6 km.

Map center: 260486, 341642

Legend

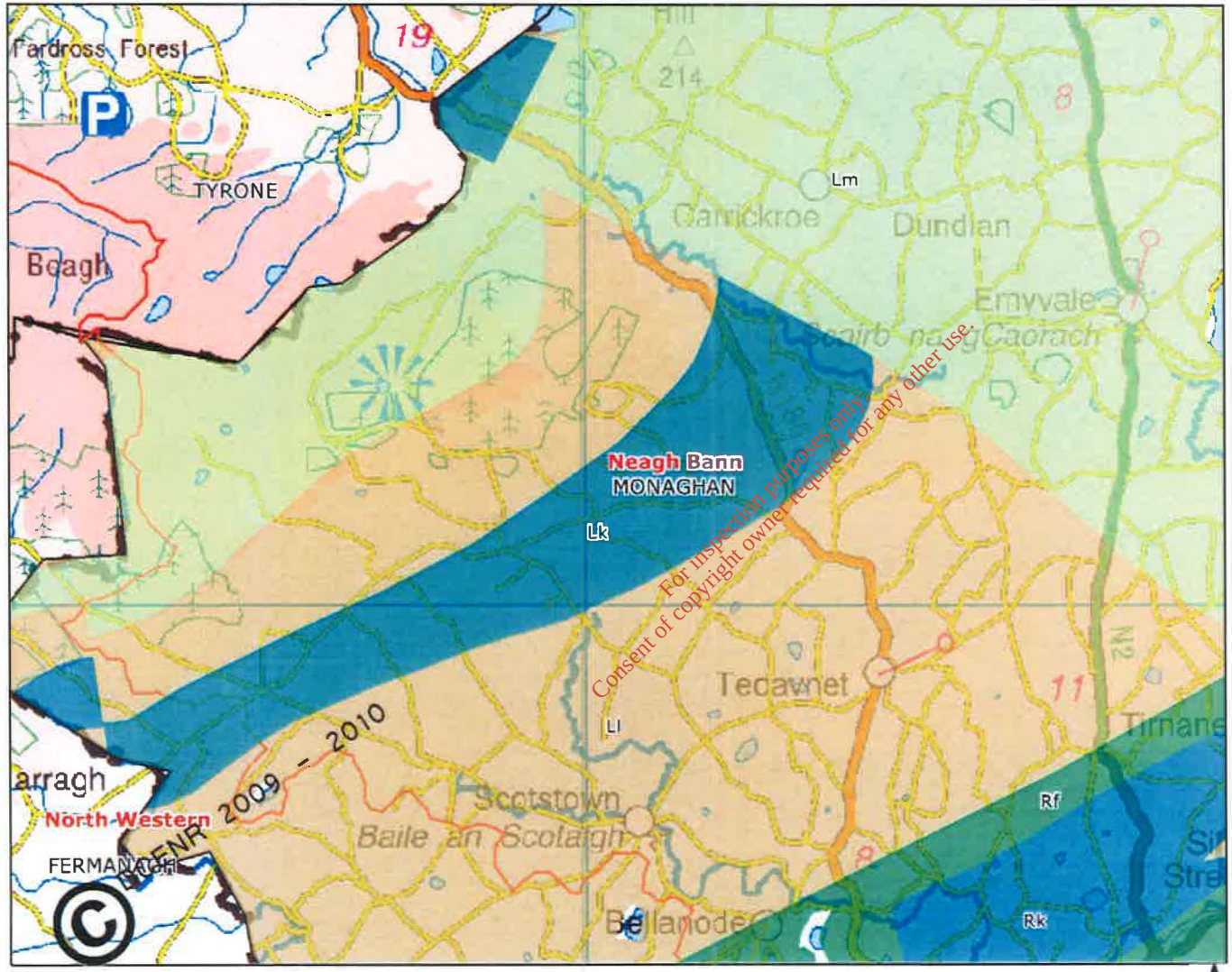
EPA Source Protection Area

- SI - Inner Protection Area
- SO - Outer Protection Area
- RBD Boundaries
- County Boundaries

Scale: 1:74,576

Snapshot Date: 02-Nov-2014

Niall Mc Kenna - National Draft Bedrock Aquifer Map



Legend

National Draft Bedrock Aquifer Map

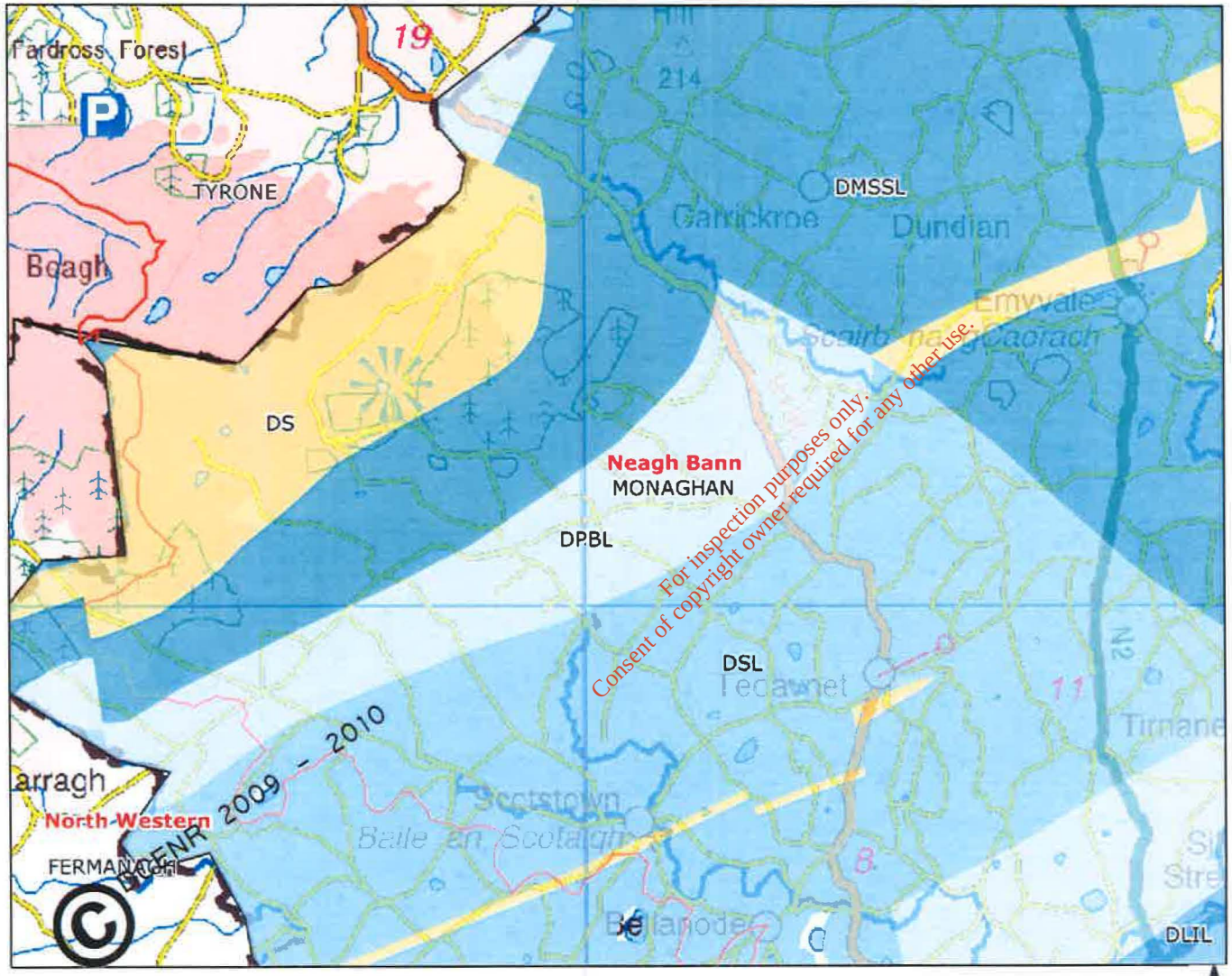
- Rf - Regionally Important Aquifer - Fissured bedrock
- Rk - Regionally Important Aquifer - Karstified
- Rkd - Regionally Important Aquifer - Karstified (diffuse)
- Rkc - Regionally Important Aquifer - Karstified (conduit)
- Lm - Locally Important Aquifer - Bedrock which is Generally Moderately Productive
- Lk - Locally Important Aquifer - Karstified
- Ll - Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones
- Pl - Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones
- Pu - Poor Aquifer - Bedrock which is Generally Unproductive
- Unclassified
- RBD Boundaries
- County Boundaries

Scale: 1:89,015

Map center: 260486, 341642

Snapshot Date: 02-Nov-2014

Niall Mc Kenna - National Draft Generalised Bedrock Map



Legend

National Draft Generalised Bedrock Map

- BV - Basalts and other Volcanic rocks
- CM - Cambrian Metasediments
- DDL - Dinantian Dolomitised Limestones
- DESSL - Dinantian early Sandstones, Shales and Limestones
- DKS - Devonian Kiltorcan type Sandstones
- DLIL - Dinantian Lower Impure Limestones
- DMSC - Dinantian Mudstones and Sandstones Cork Group
- MSSL - Dinantian Mixed Sandstones, Shales and Limestones
- DORS - Devonian Old Red Sandstones
- DPBL - Dinantian Pure Bedded Limestones
- DPUL - Dinantian Pure Unbedded Limestones
- DS - Dinantian Sandstones
- DSL - Dinantian Shales and Limestones
- DUIL - Dinantian Upper Impure Limestones
- GII - Granites and other Igneous Intrusive rocks
- NSA - Namurian Sandstones
- NSH - Namurian Shales
- NU - Namurian Undifferentiated
- OM - Ordovician Metasediments
- OV - Ordovician Volcanics
- PM - Precambrian Marbles
- PQGS - Precambrian Quartzites, Gneisses and Schists
- PTMG - Permo Triassic Mudstones and Gypsum
- PTS - Permo Triassic Sandstones
- SMV - Silurian Metasediments and Volcanics
- WSA - Westphalian Sandstones
- WSH - Westphalian Shales

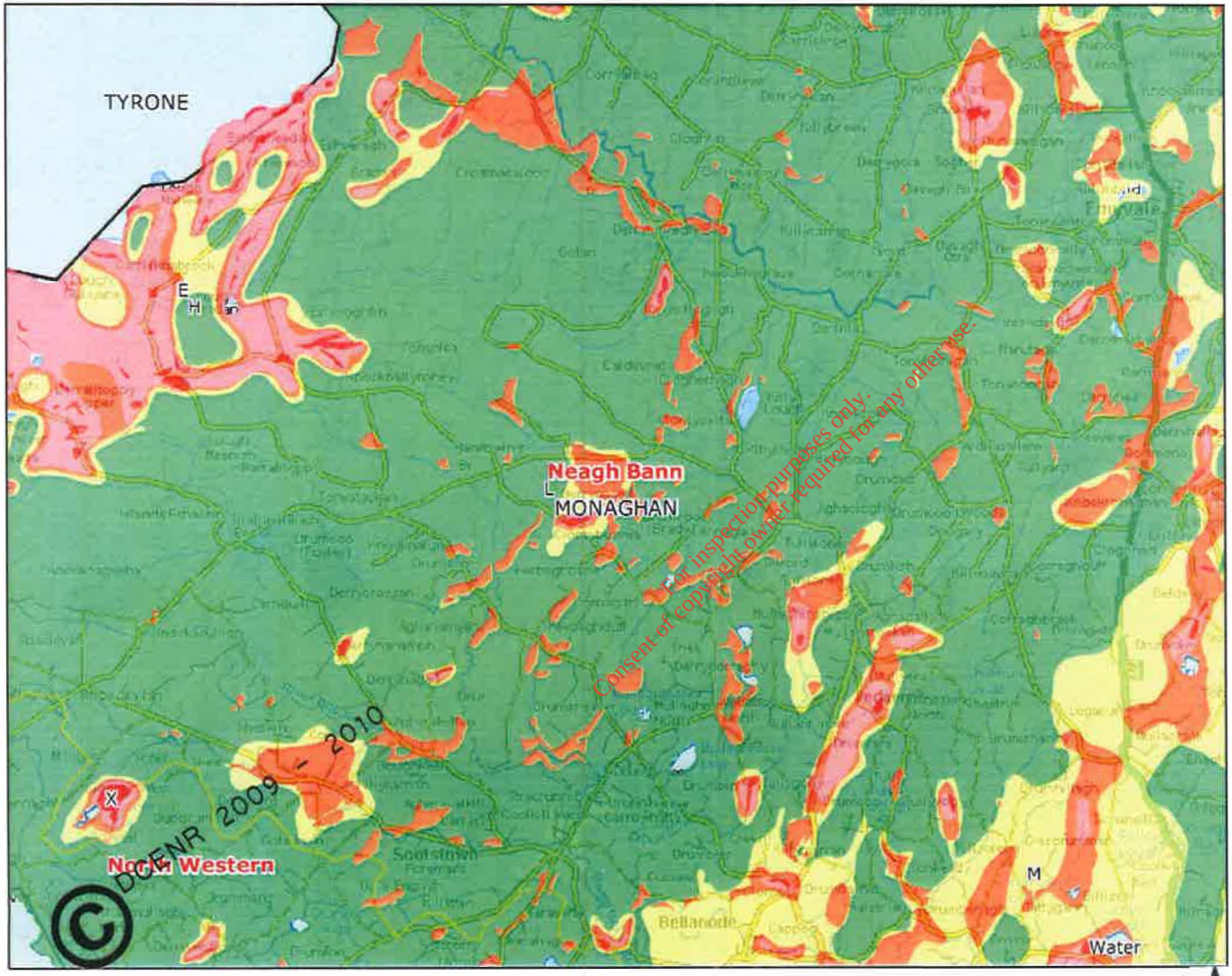
- RBD Boundaries
- County Boundaries

Scale: 1:89,015

Map center: 260486, 341642

Snapshot Date: 02-Nov-2014

Niall Mc Kenna - National Vulnerability



0 1.9 3.8 5.7 km.

Map center: 261507, 341030

Legend

Vulnerability

- X (Rock near Surface or Karst)
- E - Extreme
- H - High
- M - Moderate
- L - Low
- Water

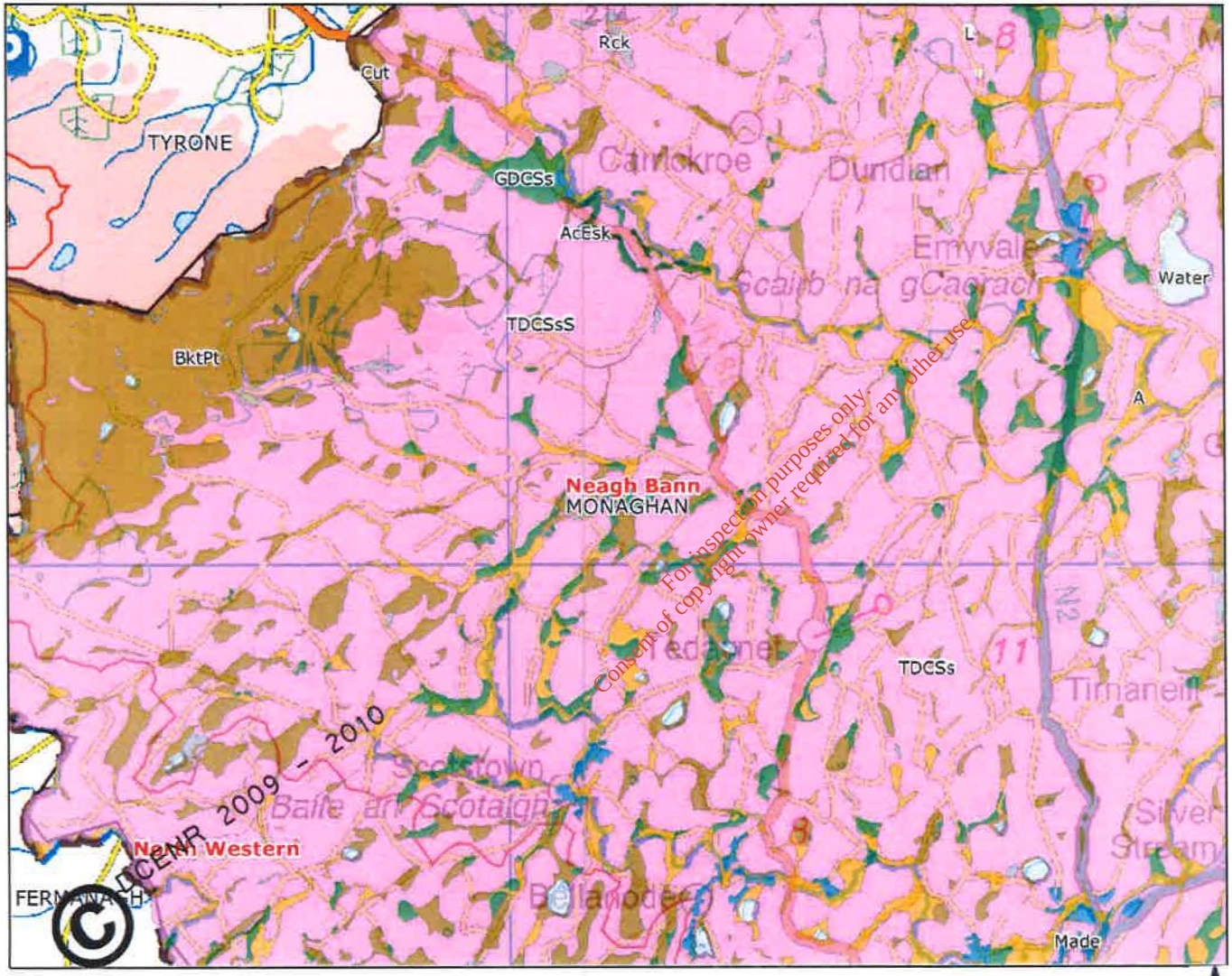
RBD Boundaries

County Boundaries

Scale: 1:71,703

Snapshot Date: 02-Nov-2014

Niall Mc Kenna - Teagasc Subsoils



Legend

RBD Subsoils

- Alluvium
- Beach sands and gravels
- Bedrock outcrop and subcrop
- Esker sands and gravels
- Glaciofluvial sands and gravels
- Lake sediments
- Made ground
- Marine/estuarine silts and clays
- Marsh
- Peat
- Scree
- Till derived chiefly from Devonian sandstones
- Till derived chiefly from Lower Palaeozoic rocks
- Till derived chiefly from Namurian rocks
- Till derived chiefly from granite
- Till derived chiefly from limestone
- Till derived chiefly from metamorphic rocks
- Till derived from metamorphic rocks
- Till derived from mixed Devonian and Carboniferous rocks
- Water
- Windblown sands

RBD Boundaries

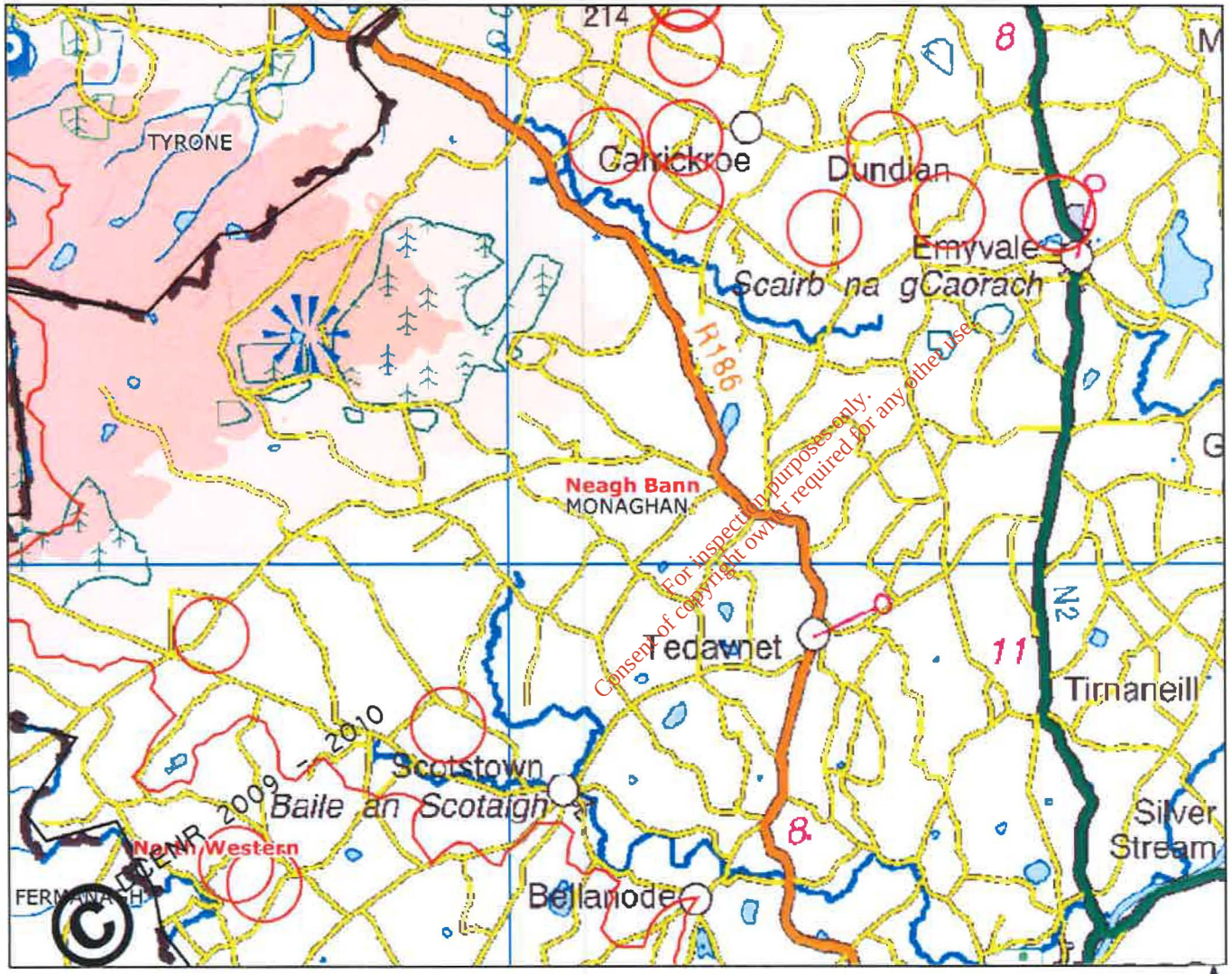
County Boundaries

Scale: 1:85,585

Map center: 261507, 341030

Snapshot Date: 02-Nov-2014

Niall Mc Kenna - Wells Accuracy within 1km



Legend

- Wells Accuracy within 1km
- RBD Boundaries
- County Boundaries

Scale: 1:85,585

Snapshot Date: 02-Nov-2014

15/059 TE

8th April 2015

Planning Department
Monaghan County Council
County Offices
The Glen,
Monaghan

Re: Further Information Request for Niall Mc Kenna, Knockballyroney, Scotstown, Co. Monaghan. Monaghan County Council Planning Ref P14/346

Dear Sir/Madam,

Please find enclosed further information as requested relating to Niall Mc Kenna, Knockballyroney, Scotstown, Co. Monaghan.

Further Information Requested - Item No. 6

> ""*The site is located within the catchment area of a high status river monitoring site. The submitted Environmental Impact Statement does not address possible impacts of the proposed development on this high status river monitoring site. A full assessment of the potential impacts of the proposed development on the River Blackwater is therefore required. This assessment shall be carried out in accordance with the recommendations of a report published by the EPA entitled* "Management Strategies for the Protection of High Status Water bodies".

The subject site is located within the townland of Knockballyroney, Scotstown, Co. Monaghan along the L1000. The site currently consists of four mushroom houses and a store. At present the site is not in use for mushroom production. The site(Grid Ref E 259899, N 341146) is located approximately 4.5 km North of the village of Scotstown Co. Monaghan on the Knockatallan to Tydavnet road (R186). The site is accessed from the local road. The proposed development site is located in a rural area of County Monaghan and is surrounded by agricultural lands. The total site area which includes all of the existing and proposed development works encompasses an area of 3.42 acres/1.38 Hectares.

1.0 Process Description

The proposed licensable activity involves the rearing of chicks from day old through to slaughter weight. The reared birds will then be transported to a licensed facility where they will be slaughtered and processed. Prior to the delivery of chicks the floor area in the houses is bedded with straw or wood shavings and the heating system is turned on to warm the building for receipt of a new batch of chicks. Day old chickens will be delivered from a hatchery and placed in each of the broiler houses on-site. The birds will be fed a wheat based animal feed during the 35-42 days when they are on-site. When all the birds have been removed from the houses the poultry litter will be removed. Cleaning of the houses after each batch involves removal of the poultry litter by mechanical loader, the floors are then swept and then washed with water. Wash water will be collected on-site in underground storage tanks, and recovered as fertiliser. The houses are disinfected and left to dry for approximately two weeks at which stage the cycle re-starts.

2.0 Emissions

The main emissions from the activity are odour and dust emission from the building's ventilation system, wash water and poultry litter which may be sent to mushroom composting as a fertiliser or be used as an agricultural fertiliser.

2.1 Emissions to Air

Emissions to air from the poultry rearing units represent the most significant air emission. The main contaminants that are present in the ventilation emissions are odours, dust and ammonia. Poultry litter removal represents the most significant odour and dust emission potential, however the removal of litter will be limited to a number of hours every eight to ten weeks.

2.2 Emissions to Sewer

There are no emissions to sewer from this installation. There will be domestic emissions via a septic tank or treatment system, as deemed appropriate.

2.3 Emissions to Waters

There are no process emissions to water from this installation.

2.4 Surface Water

All poultry rearing activities will be undertaken within the rearing houses. The yard area around the doors of the broiler houses may be contaminated with poultry litter during the period when the litter

is being removed (1 day every 8-10 weeks). All surface water from roofs and yard areas will be directed via drains along each side of the poultry houses to a surface water drain along the north-eastern site boundary. The Scotstown River, a tributary of the River Blackwater, is located along the southern boundary of the site. This river flows in a south easterly direction for approximately 4km where it joins the River Blackwater. This is in the Neagh Bann River Basin District. The nearest EPA water quality monitoring points are on the Scotstown River approximately 5km downstream of the site at 038020500 (Br u/s Scotstown Br) and 7km downstream at 038020400 (Br at Mill, S of Drumscor). Biological water quality is recorded as Q4 (unpolluted) for both sites in 2004. Under the Water Framework Directive all water bodies must achieve or retain good status by 2015. According to 2007 - 2009 Water Framework Directive monitoring programme the Scotstown River (EPA ID 03S020200 Bridge S of Knockballyroney) was classified as Q 4-5 high status at E 258876 N 341359.

Surface water run-off should be uncontaminated and therefore should have no impact on surface water quality off-site.

2.5 Emissions to Ground and Groundwater

All water from roof and hard standing areas will be collected and after appropriate treatment discharged to groundwater. The storage of all liquid fuels, chemicals etc will be in appropriately bunded areas to avoid the risk of spillage.

2.6 Waste

There shall be no waste disposal/recovery activities undertaken on-site.

2.7 Manure Poultry Litter

Manure/poultry litter is generated as part of the poultry rearing activity. The poultry litter will be used as fertiliser on agricultural lands in accordance with the European Communities (Good Apicultural Practice for Protection of Waters) Regulations 2014.

3.0 Potential Impacts

3.1 Construction Phase

3.1.1 Surface Water

The main potential impact to surface water that will occur during the construction stage is surface/storm water runoff into the adjoining drains. The surface runoff may carry pollutants such as chemicals, oils, paints, fuels, cements and tar. If these substances were to enter the Scotstown River

adjoining the site they would cause an alteration of water quality and therefore have an impact on habitats associated with the surface water body such as the River Blackwater downstream.

Any excavation works on site during the construction phase will potentially lead to silt entering surface water in the surrounding area via surface water runoff. The entry of hydrocarbons from fuels into the surface system could have an effect on water quality and leaching from the ground surface into surface water which could have an effect on surface water quality.

Overall construction work for the development of the site will entail excavation, handling, movement and storage of materials, including chemical substances and excavated soil, which give rise to the potential for contamination both on and off site through surface water runoff.

The construction phase of the proposed development is likely to increase surface runoff on the subject site as a result of:

- Heavy machinery used on-site may result in the compaction of the upper soil horizons; this would reduce infiltration into the ground;
- Areas of vegetation cover will be replaced with impermeable areas, compressing hard standing and buildings.

Mitigation measures put in place will ensure that the risk of contamination of the surface waters is kept to a minimum and that the impact of the construction phase on surface waters is short term and neutral.

3.1.2 Stockpiles

It is envisaged that topsoil and stone will be stockpiled for short periods during the course of the proposed development. Such stockpiles have the potential to impact upon surface water through sediment runoff if not properly managed.

3.1.3 Foul Water

Sanitary facilities for the construction phase will comprise of utilising the existing facilities. The overall predicted impact during the construction phase on the surrounding foul drainage system is considered insignificant.

3.1.4 Refuelling

Leaks and/or spillages from refuelling machinery, vehicles and spillages of other chemicals (oils, fuel, glue, paints, etc.) at the subject site during the construction phase could adversely impact on the surrounding surface water if not properly managed.

3.1.5 Potable Water Supply

A potable water supply will be required during the construction phase. It is anticipated that it will be obtained from the existing mains water supply. The potable water demand from the construction phase will be relatively low and the impact on this supply will be minimal.

3.2 Operational Phase Impacts

3.2.1 Potential Pollutants

Research indicates that the equivalent of many decades of natural or even agricultural erosion may take place during a single year from areas cleared for construction. In the absence of adequate mitigation measures, suspended sediment due to runoff of soil from construction areas can have severe negative impacts on invertebrate and plant life and on all life stages of salmonid fish as follows:

- Suspended sediment can settle on spawning areas, infill the intragravel voids and smother the eggs and alevins (newly hatched fish) in the gravel;
- Bed Load (coarse material transported along the bottom of the stream) and settled sediments can infill pools and riffles, reducing the availability and quality of rearing habitat for fish;
- Suspended sediment can reduce water clarity and visibility in the stream, impairing the ability of fish to find food items;
- Settled sediments can smother and displace aquatic organisms such as macro invertebrates, reducing the amount of food items available to fish;
- Increased levels of sediment can displace fish out of prime habitat into less suitable areas
- Suspended solids can abrade or clog the gills of salmonid fish. It takes a high concentration of solid wastes to clog a fish gill and cause asphyxiation, but only a little to cause abrasions and thus permit the possibility of infections.

In addition to suspended solids, the potential exists for a range of serious pollutants to enter watercourses during construction. For example, any of the following will have deleterious effects on fish, plants and invertebrates if allowed to enter watercourses:

- Raw or uncured concrete and grouts;
- Wash down water from exposed aggregate surfaces, cast-in-place concrete and from concrete trucks;
- Fuels, lubricants and hydraulic fluids for equipment used on the development site;
- Chemicals, fuels and lubricants used during construction.

3.2.2 Chemical/Fuel Spillage

Leaking oil / diesel in the car parking areas could potentially give rise to pollution if allowed to discharge to surface water. In the event of an uncontrolled spillage of such materials, contamination of surface water could occur.

3.2.3 Fire Water Management

In the unlikely event of a fire occurring at the site, and without the appropriate mitigation measure in place, there is the potential for contaminated fire water to be released from the site to the nearby watercourses.

3.2.4 Surface Water Discharge

It is not considered that the proposed development, once operational will have a significant impact on surface hydrology in the surrounding area. However without proper control measures, surface water from the proposed development has the potential to pollute nearby watercourses.

Further Information Requested - Item No. 5 (b)

"Proposals for the discharge of storm water from the site which shall take acoount of the findings of the assessment required under point 3 above."

All surface storm and roof water collected from the proposed poultry units will be diverted to the filter unit which runs along the outside of each unit. Two 3.0m x 5.0m x 2.4m Deep Precast Washings Tanks will be located at the rear of each of the proposed new poultry units. All soiled washings water will be diverted to these locations via falls in the floor screed. All soiled surface water will be spread on Applicant's land holding in accordance with the requirements under European Communities (Good Agricultural Practice for Protection of Waters) Regulations 2014.

A 50m^2 Sub-Soil Polishing Filter which will collect all roof and street waters prior to its final discharge to groundwater will be located to the West of the site.

Further Information Requested - Item No. 5 (e)

"Proposals to prevent the discharge of waters containing soils, silt or other polluting matter to the adjacent watercourse during construction works. These proposals shall take account to the Inland Fisheries Ireland guidance on the protection of fisheries habitat during construction and development works".

Traynor Environmental Ltd propose the following measures to prevent the discharge of soiled waters form the site, taking into consideration the Inland Fisheries Ireland guidance on the protection of fisheries habitat during construction and development works.

1.0 Environmental Operating Plan

Before works commence on the site, the contractor will be required to prepare an Environmental Operating Plan and the contractor will be required to consult with IFI and Monaghan County Council in relation to the final detail of the Plan and shall include their requirements in this regard.

Inland Fisheries Ireland will be informed when works are about to commence on site. Inland fisheries will be provided with sufficient time to allow inspection of the control measures that are put in place.

2.0 Avoidance

Site clearance involving topsoil stripping will progress with the earthworks and will not be carried out over large areas in advance resulting in these areas being exposed for long periods of time.

Clean water runoff from surrounding areas will be directed away from the works area so as to minimise the volume of runoff water generate.

3.0 Sediment Control Measures

The Scotstown River will be fenced off with silt fences set back 3m from the River Bank until construction activity is complete.

All soiled water from the works area will be passed through appropriately sized settlement pond area (providing at least 24hours retention time based on a 1m deep pond and a 1 in 10 year rainfall event (60mm rainfall per m2). These temporary settlement ponds may be located throughout the site adjacent to the works area. Each pond will be provided with a double silt curtain at the outlet.

No direct discharge of site runoff water to the Scotstown River will be permitted. Runoff water after treatment via settlement ponds and silt fence screening will be discharged over undisturbed land for additional filtering prior to it reaching the stream. A 20m Buffer of undisturbed land will be retained adjacent to the stream for this purpose.

The control measures including settlement ponds, and Silt Fences are to be inspected daily by the contractor to ensure there correct functioning

No Stockpiling of material within 20m of the stream
There are concrete works proposed within relative proximity to the Scotstown River and consequently mitigation measures are therefore required for placing of concrete in or near surface waters. General measures are:

- There will be no hosing into surface water drains of spills of concrete, cement, grout or similar materials. Such spills shall be contained immediately and runoff prevented from entering the watercourse

- Concrete waste and wash-down water will be contained and managed on site to prevent pollution of surface and groundwater.
- Washout from concrete lorries, with the exception of the chute, will not be permitted on site and will only take place at the batching plant
- Chute washout will be carried out at designated locations only. These locations will be signposted and concrete plant and delivery drivers informed on arrival on site.
- Chute washout locations will be provided with appropriate designated, contained impermeable area and treatment facilities including adequately sized settlement tanks. The clear water from the settlement tanks shall be pH corrected prior to discharge into the larger settlement pond areas.

4.0 Storm Water Management

Site management is to be focused on ensuring that all storm water collection surfaces and facilities are maintained in clean and fully functional condition at all times so that the possibility of storm water carrying significant pollution to the stream is effectively eliminated. The emission of pollutants is to be effectively controlled and prevented by the regular removal of all solid waste materials from the site to authorised disposal/recovery sites elsewhere, and by the removal of poultry manure off site by an experienced contractor. Accordingly, it is expected that there should not be any significant emissions of pollutants from the site and that there should be no perceptible environmental effect arising from emission of pollutants from the site.

5.0 Constructional Compound

The site compound area to be located away from the Scotstown River along the southern boundary (at least 20m). Wastewater drainage from all site offices and construction facilities will be contained and disposed of in an appropriate manner to prevent water pollution and in accordance with the relevant statutory requirements.

The storage of fuels, other hydrocarbons and other chemicals within the construction compounds shall be in accordance with relevant legislation and with best practice. In particular

- All fuel/hydrocarbon/ chemical (fluid) storage areas shall be bunded to 110% of storage capacity.
- Storage of these materials shall not be within 30m of a sensitive watercourse (Scotstown River and subsequently the River Black Water).

6.0 Summary of Mitigation Measures during the Construction Phase

A number of mitigation measures will be put in place to prevent any significant contamination of surface waters during the construction phase as follows;

- Settlement ponds will be used where necessary throughout the site to prevent sediment laden surface water runoff from the site to local surface waters.
- Raw or uncured waste concrete will be disposed of appropriately by removal from the site.
- Wash down water from exposed aggregate surfaces, cast-in-place concrete and from concrete trucks will be appropriately controlled on-site.
- Materials which are hazardous to the environment such as fuels, hydraulic fluids and waste oils on site will be carefully handled and stored to avoid spillage according to existing site procedures. All waste generated on site which could potentially give rise to water pollution will be disposed of appropriately in accordance with the construction environmental management system and legal requirements.
- Maintenance and repair of all construction equipment including, fuelling and lubrication, will only be carried out in designated areas.
- Storage locations for excavated materials, equipment, hydrocarbons (including fuels for machinery) will be designated prior to commencement of works. Excavated materials will not be stored within 20m of any ditches, dry or wet, watercourses or wetland areas.
- Fuels, oils, greases and hydraulic fluids will be stored in bunded compounds well away from the surface water drains.
- All hydrocarbons must be stored within 110% bunded containers.
- Refuelling of machinery, will be carried out on hard surfaced designated areas where possible. In the event that refuelling is required outside of this area, fuel will be transported in a mobile double skinned tank and a spill tray will be employed during re-fuelling operations.
- Machinery will not be serviced within the site.
- An adequate supply of spill kits and hydrocarbon adsorbent packs will be available throughout the site with all vehicles onsite carrying spill kits. All relevant personnel will be fully trained in the use of the equipment. Any used spill kits will be disposed of appropriately off-site.
- All mitigation measures put in place must be inspected daily during construction works.
- All works must follow the guidance set out in the CIRIA guidance note Control of Water Pollution from Construction Sites (CIRIA, 2001).

Further Information Requested - Item No. 5 (f)

"A construction and demolition plan in accordance with the Local Government (Waste Management) Act 1996 as amended."

A Construction Demolition Plan has been prepared for the proposed development works. The C & D WMP is included in Appendix B.

Should you have any queries in relation to this, require any further information please do not hesitate to contact me at the above number.

Yours faithfully

Nevin Traynor

BSc. Env, H.Dip I.T, Cert SHWW, EPA/FAS Cert.

For **Traynor Environmental**

NIALL MC KENNA, KNOCKBALLYRONEY, SCOTSTOWN, CO. MONAGHAN
PLANNING REF P14/346
COMPLETED BY
TRAYNOR ENVIRONMENTAL LTD

APPENDIX A – STATEMENT OF SCREENING FOR APPROPRIATE ASSESSMENT

Traynor Environmental Ltd.

STATEMENT OF SCREENING FOR APPROPRIATE ASSESSMENT

OF PROPOSED DEVELOPMENT AT

KNOCKBALLYRONEY, SCOTSTOWN, CO. MONAGHAN

In Line with the Requirements of Article 6(3) of the EU Habitats Directive

Prepared By:

Traynor Environmental Ltd.

Traynor Environmental Ltd

Belturbet Business Park,

Creeny, Belturbet

Co. Cavan

Tel: 049 9522236 E-Mail: nevin@traynorenv.com

March 2015

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Background

Article 6 of the EU Habitat's Directive (Council Directive 92/43/EEC) requires that all plans and projects be screened for potential impacts on Special Areas of Conservation (SACs) or Special Protection Areas (SPAs). The aim of this screening process is to establish whether or not a full Appropriate Assessment of the proposed development described in this report is necessary.

This report contains a comprehensive assessment of the ecological impacts of a proposed development at Knockballyroney, Scotstown, Co. Monaghan. It was carried out in March 2015 by Nevin Traynor of Traynor of Traynor Environmental Ltd. This assessment allowed areas of potential ecological value and potential ecological constraints associated with this proposed development to be identified and it also enabled potential ecological impacts associated with the proposed development to be assessed and mitigated for.

In accordance with Article 6(3) of the EU Habitat's Directive regarding Appropriate Assessment, this screening exercise was carried out in order to identify whether any significant impacts on designated sites are likely. This exercise will also determine the appropriateness of the proposed project, in the context of the conservation status of any designated sites.

1.2 Regulatory Context

1.2.1 Relevant Legalisation

The Birds Directive (Council Directive 79/409/EEC) implies that particular protection is given to sites (Special Protection Areas) which support certain bird species listed in Annex I of the Directive and that surveys of development sites should consider the status of such species.

The EU Habitats Directive (92/43/EEC) gives protection to sites (Special Areas of Conservation) which support particular habitats and species listed in annexes to this directive. Articles 6(3) and 6(4) of this Directive call for the undertaking of an Appropriate Assessment for plans and projects likely to have an effect on designated sites. This is explained in greater detail in the following section.

The Wildlife Act 1976 (and its amendment of 2000) provides protection to most wild birds and animals. Interference with such species can only occur under licence. Under the act it is an offence to "wilfully interfere with or destroy the breeding place or resting place of any protected wild animal". The basic designation for wildlife is the Natural Heritage Area (NHA). This is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. Under the Wildlife Amendment Act (2000) NHAs are legally protected from damage. NHAs are not part of the Natura 2000 network and so the Appropriate Assessment process does not apply to them.

The Water Framework Directive (WFD) (2000/60/EC), which came into force in December 2000, establishes a framework for community action in the field of water policy. The WFD was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003). The WFD rationalises and updates existing legislation and provides for water management on the basis of River Basin Districts (RBDs). RBDs are essentially administrative areas for coordinated water management and are comprised of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD. The aim of the WFD is to ensure that waters achieve at least good status by 2015 and that status doesn't deteriorate in any waters.

1.2.2 Appropriate Assessment and the Habitats Directive

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora – the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as *Natura 2000*. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC).

Articles 6(3) and 6(4) of the Habitats Directive sets out the decision-making tests for plans or projects affecting Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

Article 6(4) deals with the steps that should be taken when it is determined, as a result of appropriate assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case.

Article 6(4) states:

"If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding

public interest, including those of a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

1.2.3 The Appropriate Assessment Process

The aim of Appropriate Assessment is to assess the implications of a proposal in respect of a site's conservation objectives.

Appropriate Assessment is an assessment of the potential effects of a proposed plan - 'in combination' with other plans and projects - on one or more European sites. The 'Appropriate Assessment' itself is a statement which must be made by the competent authority which says whether the plan affects the integrity of a European site. The actual process of determining whether or not the plan will affect the site is also commonly referred to as 'Appropriate Assessment'.

If adverse impacts on the site cannot be avoided, then mitigation measures should be applied during the Appropriate Assessment process to the point where no adverse impacts on the site remain (European Commission, 2000, 2001).

The conclusions of the appropriate assessment report should enable the competent authority to ascertain whether the proposal would adversely affect the integrity of the site (European Commission, 2000, 2001).

Under the terms of the directive (European Commission, 2000, 2001), consent can only be granted for a project if, as a result of the appropriate assessment either (a) it is concluded that the integrity of the site will not be adversely affected, or (b) where an adverse effect is anticipated, there is shown to be an absence of alternative solutions, and there exists imperative reasons of overriding public interest for the project should go ahead.

2.0 METHODOLOGY

2.1 Appropriate Assessment

This Statement of Screening for Appropriate Assessment (Stage 1) has been prepared with reference to the following:

- European Commission (2000). Managing Natura 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC.
- European Commission (2002). Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.
- European Commission (2006). Nature and Biodiversity Cases: Ruling of the European Court of Justice.
- European Commission (2007). Clarification of the Concepts of: Alternative Solution, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.
- Department of Environment, Heritage and Local Government (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.
- The EC Guidance sets out a number of principles as to how to approach decision making during the process. The primary one is 'the precautionary principle' which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty.

When considering the precautionary principle, the emphasis for assessment should be on objectively demonstrating with supporting evidence that:

- There will be no significant effects on a Natura 2000 site;
- There will be no adverse effects on the integrity of a Natura 2000 site;
- There is an absence of alternatives to the project or plan that is likely to have an adverse effect to the integrity of a Natura 2000 site; and
- There are compensation measures that maintain or enhance the overall coherence of Natura 2000.

This translates into a four stage process to assess the impacts, on a designated site or species, of a policy or proposal.

The EC Guidance states that "each stage determines whether a further stage in the process is required". Consequently, the Council may not need to proceed through all four stages in undertaking the Appropriate Assessment.

The four stage process is:

Stage 1: Screening – The process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether or not these impacts are likely to be significant;

Stage 2: Appropriate Assessment – The consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts;

Stage 3: Assessment of Alternative Solutions – The process which examines alternative ways of achieving objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site;

Stage 4: Assessment where no alternative solutions exist and where adverse impacts remain – An assessment of the compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

In complying with the obligations set out in Articles 6(3) and following the guidelines described above, this screening report has been structured as a stage by stage approach as follows:

- Description of the proposed project;
- Identification of the Natura 2000 sites close to the proposed development;
- Identification and description of any individual and cumulative impacts on the Natura 2000 sites likely to result from the project;
- Assessment of the significance of the impacts identified above on site integrity. Exclusion of sites where it can be objectively concluded that there will be no significant effects;
- Screening statement with conclusions.

2.2 Desk Studies

Information on the site and the area of the proposed development was studied prior to the completion of this statement. The sources that were used to collect the data are listed below:

- Ordnance Survey of Ireland - Aerial photographs and maps;
- National Parks and Wildlife Service (NPWS) – Information on designated sites and species;
- Environmental Protection Agency (EPA) – Information on water quality;
- National Biodiversity Data Centre (NBDC) – Information on protected species;
- Geological Survey of Ireland (GSI) – Information on geology;
- Monaghan County Council – Relevant development plans and planning information.

3.0 SCREENING

3.1 Development Description & Surrounding Environment

Niall Mc Kenna has applied to Monaghan County Council for permission to demolish a single mushroom tunnel and construct two poultry units together with underground washings tanks, erect vertical meal bins, use existing domestic entrance at existing farmyard, and all associated site works. This proposed development will consist of the installation of two new poultry units and associated site development works.

The site is located within a locally important aquifer (LK) which has been classified as having low vulnerability. It has an R1 response according to the response matrix for on-site treatment systems.

3.2 Site Location and Surrounding Environment

The proposed development site is situated on the L1000 just off the R186, the Tedavnet to Knockatallan Road. It is located on southern aspect of the L1000 and is adjacent to the Scotstown River. It is located approximately 4.2km north of the town of Scotstown. The site is in a predominantly rural area and it is surrounded by habitats such as agricultural grassland, treelines, river, drains and hedgerows. There has been mushroom production facility at this site in Knockballyroney for a number of years.

The Scotstown River, a tributary of the River Blackwater, is located along the southern boundary of the site. This river flows in a south easterly direction for approximately 4km where it joins the River Blackwater. This is in the Neagh Bann River Basin District. The nearest EPA water quality monitoring points are on the Scotstown River approximately 5km downstream of the site at 038020500 (Br u/s Scotstown Br) and 7km downstream at 038020400 (Br at Mill, S of Drumscor). Biological water quality is recorded as Q4 (unpolluted) for both sites in 2004. Under the Water Framework Directive all water bodies must achieve or retain good status by 2015. According to 2007 - 2009 Water Framework Directive monitoring programme the Scotstown River (EPA ID 03S020200 Bridge S of Knockballyroney) was classified as Q 4-5 high status at E 258876 N 341359.

A site location map is shown in Figure 1 and an aerial photograph of the development site is shown in Figure 2.

Figure 1 – Site Location Map (Site is Indicated with Red Dot)

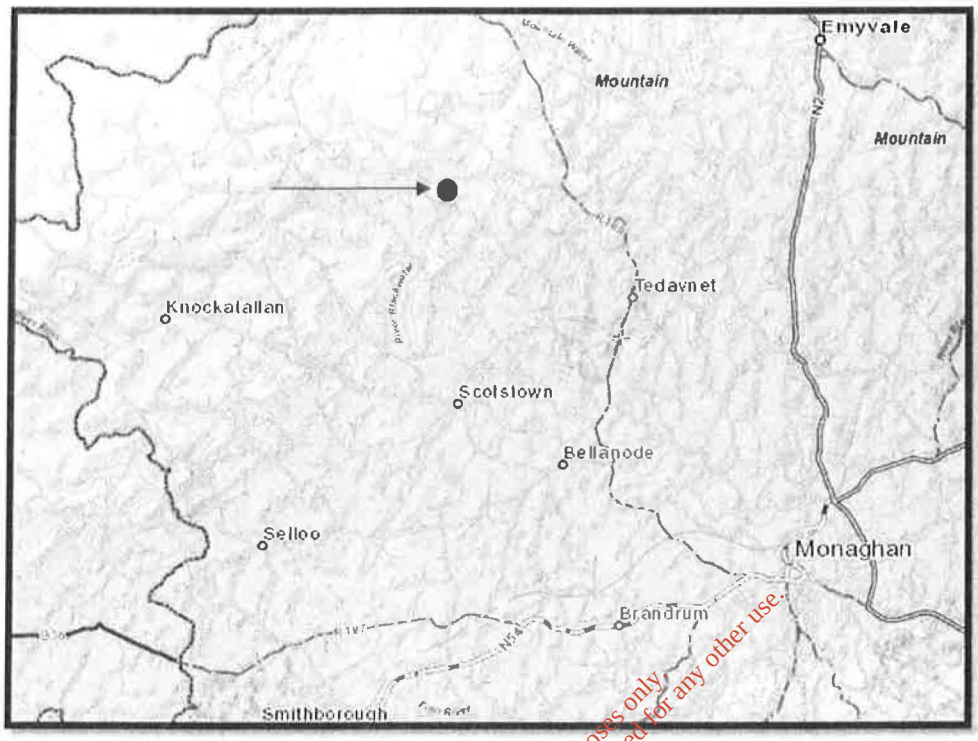
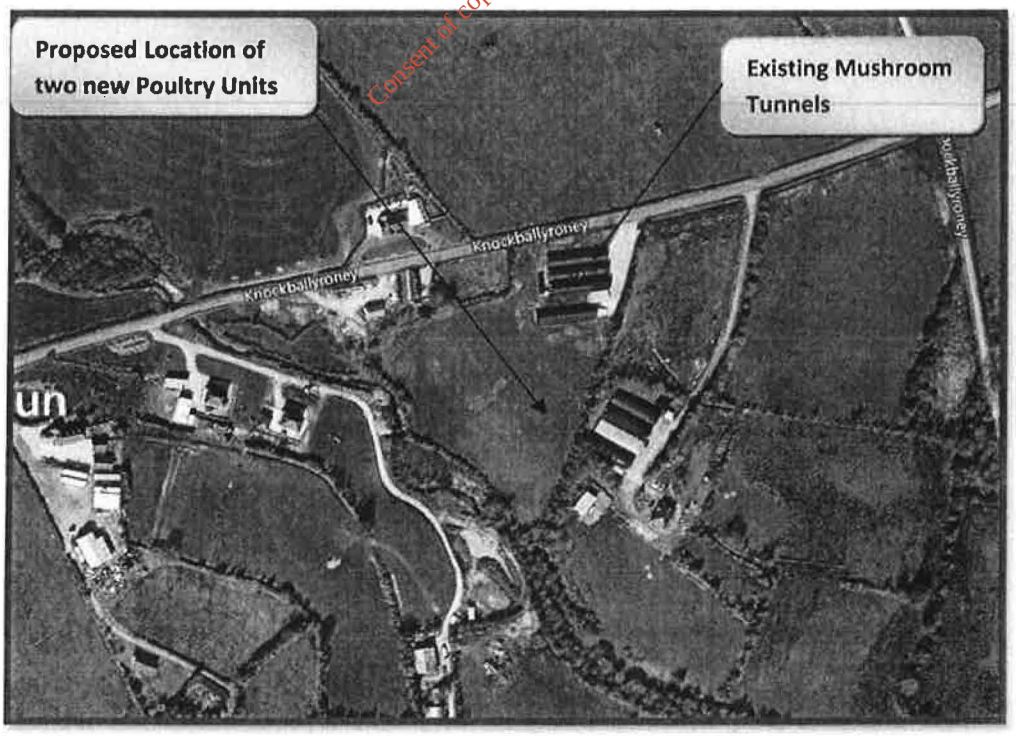


Figure 2. An Aerial Photo of the Proposed Development Site showing the location of the Proposed Development



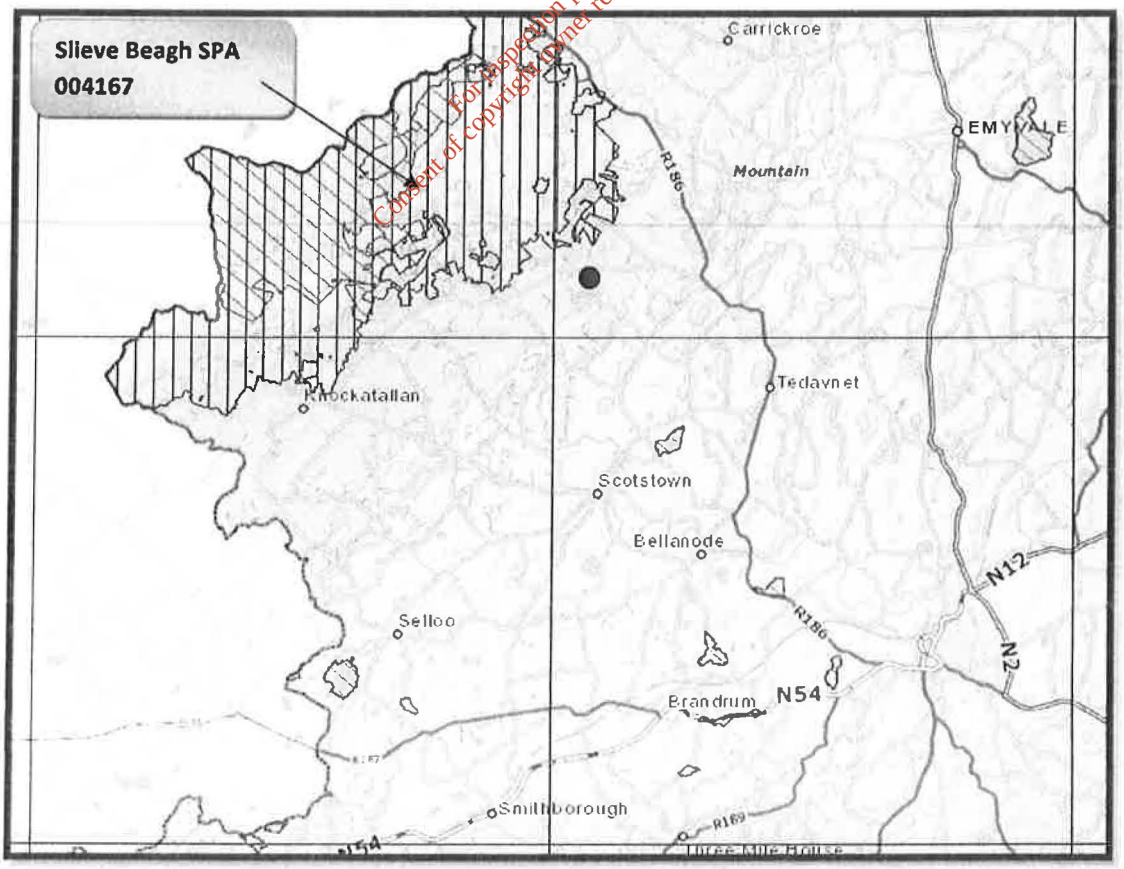
3.3 Natura 2000 Sites Identified

In accordance with the guidelines issued by the Department of the Environment and Local Government, a list of Natura 2000 sites within 10km of the proposed development have been identified and described according to their site synopsis, qualifying interests and conservation objectives. These guidelines give a recommended distance of 15km for plans whist the distance between Natura 2000 sites and proposed projects can be much less.

There is one Natura 2000 site within 10km of this proposed development. The site is located downstream of the Nature 2000 Site i.e., the Slieve Beagh *Special Protected Area (004167).* At the closet direct point, the site is approximately 0.6km north west of the proposed development.

The qualifying interests of the Slieve Beagh SPA are described below. The full NPWS description of this designated site can be viewed in Appendix A. A map of the proposed development in relation of the Natura 2000 sites is shown in Figure 3.

Figure 3 Proposed Development (Red Dot) in Relation to the Slieve Beagh SPA (Red Hatched Area, Blue Hatched Areas are proposed Natural Heritage Areas.



3.3.1 Slieve Beagh SPA 004167

The Slieve Beagh SPA comprises much of the eastern and south-eastern sectors of the Slieve Beagh upland area that extends from County Monaghan into Northern Ireland. The site consists of mountain blanket bog, which is well developed at the higher altitudes and especially at Eshbrack (peak of 365m). In places the bog is cutover and there are also wet and dry heaths present. The mid-slopes are afforested, with plantations of various ages. The remainder of the site is rough or marginal grassland. Some of the old fields system support species-rich wet grassland vegetation dominated by soft rush. Several small dystrophic lakes are present within the site.

The SPA is one of the strongholds for Hem Harrier in the country, representing over 1% of the all-Ireland total. However, when the Northern Ireland sector of Slieve Beagh is considered, there were a total of 10 breeding pairs in 2005. The mix of forestry and open areas provides optimum habitat conditions for this rare bird. The early stage of new and second-rotation conifer plantation are the most frequently used nesting sites, thought some pairs may still nest in tall heather of unplanted bog and heath. Merlin have also been recorded within the site.

The River Boyne and River Blackwater Qualifying Interests:

- Hen Harrier (Circus Cyaneus)

The Conservation Objectives of the Site are as Follows:

1. To maintain the favourable conservation status of the qualifying interests (outlined above) of this SPA.
2. To maintain the extent, species richness and biodiversity of the entire site.
3. To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

3.4 ASSESSMENT CRITERIA

The impacts (if any) of the proposed development on the Natura 2000 site identified above are described below.

Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on nearby Natura 2000 site:
Foul Water facilities at the site will have no impacts upon the integrity or the site structure of the designated sites identified, i.e., the Slieve Beagh SPA. There are no individual elements of the proposed project that are likely to give rise to negative impacts on these aforementioned sites. There is an adequate distance between the proposed development site and designated areas to ensure that no direct impacts will occur.
Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the nearby Natura 2000 sites by virtue of:
Size and scale: The proposed development is 0.6 km downstream from the Slieve Beagh SPA. Given the distance between the proposed works and the designated site and the scale of the works in relation to the designated site, it is unlikely that there will be any impact upon the Slieve Beagh SPA. **Land-take:** There will be no land-take from any designated site. There will be no interference with the boundaries of any designated site. **Distance from Natura 2000 site or key features of the site:** At its closest point, the proposed development is 0.6km downstream from Slieve Beagh SPA. The distance from these Natura 2000 sites is adequate to predict that there will be no impacts upon these designated areas. **Resource requirements (water abstraction etc):** No resources will be taken from any Natura 2000 site and there are no resource requirements that will impact upon the Slieve Beagh SPA. **Emissions:** Neither the construction nor the operation of the proposed development will result in any emissions to the identified SPA. There will be no run-off from the site directly to any SPA. **Excavation requirements:** Excavated material from the construction will be used on site. Bare soil will be reseeded straight away where appropriate. Any remaining soil will be disposed of in a responsible manner in a licensed facility away from any designated sites. **Transportation requirements:** There will be additional transportation requirements resulting from the proposed development and associated works however none that will have any impact upon the Natura 2000 site identified. **Duration of construction, operation, decommissioning etc:** Once construction begins, it should be complete within one year.
Describe any likely changes to the nearby Natura 2000 sites arising as a result of:
Reduction of habitat area: The proposed development lies outside the boundaries of the Natura 2000 sites identified in Section 3.3. There will be no reduction of designated habitat area. There will be no interference with the boundaries of any designated site. **Disturbance to key species:** The Slieve Beagh SPA is an important site for the protection of the Hen Harrier. All these water dependent species rely on high water quality and good riparian habitats. However, this

assessment has concluded that the above proposed development will have no impacts upon water quality or habitats within any designated area and therefore the listed key species within the SPA will remain undisturbed. However, with proper standards, monitoring and mitigation the proposed development will not lead to any deterioration in water quality in the area and therefore any populations of the Hen Harrier should remain undisturbed. **Habitat or species fragmentation:** There will be no habitat or species fragmentation with the SPA. **Reduction in species density:** There will be no reduction in species density. **Changes in key indicators of conservation value (water quality etc.):** There will be no negative impacts upon surface or ground water quality. There will be no negative impacts upon the water quality in any designated site, specifically in the Slieve Beagh SPA.
Describe any likely impacts on the nearby Natura 2000 sites as a whole in terms of:
Interference with the key relationships that define the structure or function of the site: It is not considered likely that there will be any impacts on the key relationships that define the structure or function of the Natura 2000 site identified.
Provide indicators of significance as a result of the identification of effects set out above in terms of:
Loss - Estimated percentage of lost area of habitat: None **Fragmentation:** None **Disruption & disturbance:** None **Change to key elements of the site (e.g. water quality etc.):** None

3.5 FINDING OF NO SIGNIFICANT EFFECTS

Finding of No Significant Effects Report Matrix	
Name of project	Proposed Development of two New Poultry Units in Knockballyroney, Scotstown, Co. Monaghan.
Name and location of Natura 2000 site	The Slieve Beagh SPA is situated 0.6 km North - North west (and downstream) of the proposed development site.
Description of project	To demolish a single mushroom tunnel and construct two poultry units together with underground washings tanks, erect vertical meal bins, use existing domestic entrance at existing farmyard, and all associated site works.
Is the project directly connected with or necessary to the management of the site?	No
Are there other projects or plans that together with project being assessed could affect the site?	No
The Assessment of Significance of Effects	
Describe how the project is likely to affect the Natura 2000 site	Having regard to the location, nature and scale of the proposed development, it is considered that there is no potential for significant effects either from the proposed development on its own or in combination with other plans and projects.
Explain why these effects are not considered significant	Not applicable as there is no potential for negative impacts
Describe how the project is likely to affect species designated under Annex II of the Habitats Directive.	No impacts likely
Data Collected to Carry out the Assessment	
Who carried out the assessment	Nevin Traynor
Sources of data	NPWS, EPA, National Biodiversity Data Centre, Monaghan County Council
Level of assessment completed	Stage1 Appropriate Assessment Screening
Where can the full results of the assessment be accessed and viewed	Full results included

4.0 APPROPRIATE ASSESSMENT CONCLUSION

5.0 BEST PRACTICE MEASURES

Whilst the proposed development will have no impacts upon the integrity of any area that has been designated as a Natura 2000 site, it is usually best practice to undertake certain mitigation measures during the construction and operation of any development. These measures will help to protect the local biodiversity of the surrounding area and ensure the protection of local water quality and wildlife. Therefore it is recommended that the following measures are implemented:

- The treatment plant installed must comply with the most recent EPA guidelines. Prior to operation, it should be inspected and signed off by a suitably qualified engineer. Thereafter, it should be emptied and serviced regularly by a suitably qualified person. *The protection of water quality in this area is of upmost importance.*

- Site preparation and construction should adhere to best practice and should conform to the Inland Fisheries Ireland *Requirements for the Protection of Fisheries Habitats during Construction and Development Works and River Sites* (www.fisheriesireland.ie).

- It is vital that there is no deterioration in water quality in the Scotstown River and subsequently the River Blackwater. This will protect both habitats and species, such as the otter and crayfish that are sensitive to pollution. Therefore, strict controls of erosion, sediment generation and other pollutants associated with the construction process should be implemented, including the provision of attenuation measures, silt traps or geotextile curtains to reduce and intercept sediment release into any local watercourses. *The protection of water quality in this area is of upmost importance.*

- Bare soil should be seeded or stabilised as soon as possible in order to minimise erosion and the release of sediments and soil particles into the drains.

- Post construction surface water run-off from hardcore / concreted / tarmacadum areas should be directed into a soak-pit. If soak-pit disposal is not viable or practical, then surface water run-off from these areas should be treated via serviced sediment and oil interceptor traps, prior to discharge into any local drainage channel.

- The applicant must ensure that any excavated soil is used / disposed of responsibly. Its disposal should not lead to the loss or damage of any natural or semi-natural habitats elsewhere. It should not be spread close to any local watercourse as it may result in an increase in the sediment load of that watercourse.

- Fuels, oils, greases and hydraulic fluids must be stored in bunded compounds well away from watercourses. Refuelling of machinery, etc., should be carried out in bunded areas. Stockpile areas for sands and gravel should be kept to a minimum size, well away from any drain or watercourse.

APPENDIX A: NPWS SITE SYNOPSIS

SITE NAME: SLIEVE BEAGH

SITE CODE: 004167

The Slieve Beagh SPA comprises much of the eastern and south-eastern sectors of the Slieve Beagh upland area that extends from County Monaghan into Northern Ireland. Mountain blanket bog is well developed at the higher altitudes and especially at Eshbrack (peak of 365 m). The vegetation is largely dominated by Deergrass (Scirpus cespitosus), Ling Heather (Calluna vulgaris), Cross-leaved Heath (Erica tetralix), Hare's-tail Cottongrass (Eriophorum vaginatum), Common Cottongrass (E. angustifolium), Crowberry (Empetrum nigrum) and a range of mosses such as Sphagnum capillifolium, S. papillosum, S. tenellum and Hypnum cupressiforme. In places, Cranberry (Vaccinium oxycoccos) is an abundant component of the vegetation. Elsewhere the bog is mostly cutover and there are also wet and dry heaths present. In total, bog and heath occupies 43% of the site. The mid-slopes are afforested (40% of site), with plantations of various ages (open canopy, closed canopy, clear-fell). The remainder of the site is rough or marginal grassland (16%). Some of the old field systems support species-rich wet grassland vegetation dominated by Soft Rush (Juncus effusus). Several small dystrophic lakes are present within the site. This SPA is one of the strongholds for Hen Harrier in the country. A survey in 2005 resulted in four confirmed breeding pairs, representing over 2.5% of the national total. However, when the Northern Ireland sector of Slieve Beagh is considered, there was a total of 10 breeding pairs in 2005. The mix of forestry and open areas provides optimum habitat conditions for this rare bird, which is listed on Annex I of the Birds Directive. The early stages of new and second-rotation conifer plantations are the most frequently used nesting sites, though some pairs may still nest in tall heather of unplanted bogs and heath. Hen Harriers will forage up to c. 5 km from the nest site, utilising open bog and moorland, young conifer plantations and hill farmland that is not too rank. Birds will often forage in openings and gaps within forests. In Ireland, small birds and small mammals appear to be the most frequently taken prey. The site is a Special Protection Area (SPA) under the E.U. Birds Directive, of special conservation interest for Hen Harrier. The site also supports breeding Merlin, a species that is also listed on Annex I of the E.U. Birds Directive. Two probable pairs were recorded in 2002-03 during survey work for a wind farm but further survey is required to determine the exact status of this small falcon. Red Grouse is found in unplanted areas of bog and heath – this is a species that has declined in Ireland and is now Redlisted. Peregrine, another E.U. Birds Directive Annex I species, nests in the Northern Ireland sector of Slieve Beagh and can be seen over the site at times. The main threat to the long-term survival of Hen Harriers within the site is further afforestation, which would reduce and fragment the area of foraging habitat, resulting in possible reductions in breeding density and productivity. Overall, the site provides excellent nesting and foraging habitat for breeding Hen Harrier and is one of the top sites in the country for the species. It may also be of national importance for breeding Merlin.

NIALL MC KENNA, KNOCKBALLYRONEY, SCOTSTOWN, CO. MONAGHAN
PLANNING REF P14/346
COMPLETED BY
TRAYNOR ENVIRONMENTAL LTD

APPENDIX B - CONSTRUCTION & DEMOLITION PLAN

Traynor Environmental Ltd.

TABLE OF CONTENTS

CONSTRUCTION & DEMOLITION PLAN

FOR

PROPOSED DEVELOPMENT FOR NIALL MC KENNA

AT

KNOCKBALLYRONEY,

SCOTSTOWN,

CO. MONAGHAN

Prepared By:

Traynor Environmental Ltd

Belturbet Business Park,

Creeny, Belturbet

Co. Cavan

Traynor Environmental Ltd.

March 2015

1.0 DESCRIPTION OF PROJECT

This Construction and Demolition Waste Management Plan (CDWMP) has been prepared by Traynor Environmental Ltd as part of an additional information request from Monaghan County Council in relation to Mr Niall McKenna's proposal to demolish a single mushroom tunnel and construct two poultry units together with underground washings tanks, erect vertical meal bins, use existing domestic entrance at existing farmyard, and all associated site work at Knockballyroney, Scotstown, Co. Monaghan.

A construction and demolition plan in accordance with the Local Government (Waste Management) Act 1996 as amended was requested by Monaghan County Council in part 5 (f) of their additional information request.

This CDWMP has been prepared in line with the many guidance documents on the management and minimization of construction and demolition waste including;

- 'Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects' published by the Department of Environment, Heritage and Local Government (DOEHLG) in July 2006;
- CIRIA document 133 Waste Minimization in Construction;
- Local Government (Waste Management) Act 1996;
- Inland Fisheries - Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites

The proposals for CDWMP address the following aspects

- Analysis of waste arisings from the demolition process;
- Methods proposed for reuse and recycling of wastes;
- Material handling procedures; and
- Education of workforce and plan dissemination.

The project will involve the demolishion of a mushroom tunnel and contruction of two poultry units together with underground washings tanks, erect vertical meal bins and all asociated works.

2 OVERVIEW OF C&D WASTE MANAGEMENT IN IRELAND

2.1 Legislative Requirements

The Government issued a Policy Statement in September 1998 known as "Changing Our Ways" which identified objectives for the prevention, minimisation, reuse, recycling, recovery and disposal of waste in Ireland. A heavy emphasis was placed on reducing reliance on landfill, and finding alternative methods of managing waste. The target for C&D waste in this Strategy was to recycle at least 50% within a five year period (by 2003), with a progressive increase to at least 85% over fifteen years (by 2013) which are the recycling targets defined in the Waste Management (Planning) Regulations 1997.

Guidelines for the Preparation of Waste Management Plans for Construction and Demolition Projects were published by the DoEHLG. These Guidelines outline the issues that need to be addressed at the pre-planning stage of a development all the way through to its completion, which include the following:

- Predicted construction and demolition wastes;
- Waste disposal/recycling of C&D wastes at the site;
- List of sequence of Operations to be followed;
- Provision of training for waste manager and site crew;
- Details of proposed record keeping system;
- Details of waste audit procedures and plan;
- Details of consultation with relevant bodies, i.e. Local Authorities etc

One of the guiding principles of European waste legislation, which has in turn been incorporated into the Waste Management Act 1996 and subsequent Irish legislation, is the principle of "duty of care". This implies that the waste producer is responsible for waste from the time it is generated through until legal disposal (including its method of disposal.) Following on from this is the concept of "polluter pays" whereby the waste producer is liable to be prosecuted for pollution incidents, which may arise from incorrect management of waste produced, including the actions of any contractors engaged (e.g.: for collection and transport of waste).

Each waste contractor must comply with the provisions of the Waste Management Act 1996 as amended and associated Regulations. This includes the requirement that a contactor handle, transport waste to a facility, must have a waste collection permit appropriate to waste type being transported and dispose of waste in a manner that ensures that no adverse environmental Impacts occur as a result of any of these activities. Waste receiving facilities must also be appropriately licensed. Operators of such facilities are not permitted to receive any waste, unless in possession of a waste permit/licence.

3 WASTE ARISINGS FROM CONSTRUCTION & DEMOLITION PROCESS

Special attention will be paid to the sorting/segregation arrangements employed to separate the demolished structure into individual material fractions. In addition, the transportation and reception arrangements associated with the movement of materials to the predetermined licenced/permitted waste facilities for reuse or reprocessing will also be taken into consideration.

There will be no hazardous waste generated during the demolition process.

3.1 Demolition Phase

The proposed demolition phase of this project will commence, with the deconstruction of the mushroom tunnel into the recyclable components. When all materials e.g. galvanized tubular frames, fiber glass, polythene have been removed demolition of the concrete gase will take place using crushing equipment.

In the demolition phase of this project, it is estimated that the following demolition wastes/material surpluses will arise:

- Concrete;
- Masonry/Rubble;
- Metal - Galvanized tubular steel frames;
- Plastic - Polythene covering;
- Electrical wiring;
- General Waste/Rubbish

There will be no hazardous waste generated from the demolition processes. An overview of the methods to manage the primary waste streams expected is presented below. The main types of construction waste produced will be:

3.1.1 Concrete - EWC Code 17 01 01

Waste concrete will arise during the demolition process. It is proposed that waste concrete will be crushed and then used as fill for the base of new route ways on the site. All inert material including concrete generated from the demolition will be transported to each area using a moxy dump truck. It is proposed that the concrete will be broken down to approximately 150mm in size.

3.1.2 Excavated Clay and Soil EWC Code 17 05 04

Excavated clay and soil are considered suitable for landscaping the site. Topsoil will be stored separately from other soil types. All clay will be stored in segregated piles on site for subsequent re-use as mounding and landscaping in the project area.

3.1.3 Metals - EWC Code 17 04 05

Waste metal taken from the mushroom tunnel will be taken from the tubular frame holding up the external plastic structure of the mushroom tunnel and the pipe network from the buildings. All scrap metal will be segregated from the demolition material and removed off site for appropriate recycling.

3.1.4 Timber - EWC Code 17 02 01

Timber waste will be stored separately as it is readily contaminated by other wastes. Only a very small quntity of timber will be generated during the demolition process . The timber will be obtained from inside the existing mushroom tunnel from the frame of the door. All timber will be removed and stored in appropriate skips for recycling at a licensed facility.

3.1.5 Electrical Wiring EWC Code 17 04 11

Electrical wiring arising from the demolition will be removed during the stripping of the mushroom tunnel. This waste will be segregated into a designated bins for removal and recycling at an appropriate licensed facility.

3.1.6 Plastics (20 01 39)

Plastic wastes will be generated from the external polythene structure of the mushroom tunnel. This waste will be segregated into a designated skip for removal and recycling at appropriate licensed facility.

3.2 Construction Phase

The construction phase will begin with initial soil excavation in preparation of the site foundations.

The Construction phase will include the following activities

- Site Set up, fencing and site clearance;
- Transport of materials and laying foundations;
- Erection of the two poultry units.

Waste Management will form part of the overall Environmental Management Plan for the Construction Phase. This plan will be implemented by the Management Contractor for the entirety of the construction activities and will include specific detail relating to waste segregation and disposal.

Contractors will be required to submit and adhere to a method statement indicating the extent of the areas likely to be affected and demonstrating that this is the minimum disturbance necessary to achieve the required works.

Where excavation occurs, the resulting excavated fractions will be separated into subsoil, topsoil and bedrock stockpiles. Temporary storage of spoil will be managed to prevent accidental release of dust and uncontrolled surface water run-off which may contain sediment etc.

Operators used to transport any waste off site for landfilling will need to hold valid Waste Collection Permits and the waste disposal facility must have a waste licence also.

The construction phase will generate a range of waste materials including excavated material, steel, timber, plastics, cardboard packaging and small quantities of hazardous waste (e.g. mastic, adhesives and paint containers). The majority of this waste will be reused and recycled if possible, with the remaining waste materials being disposed of by licensed waste contractors to an approved waste facility in accordance with the relevant national and EU legislation.

Construction will result in the generation of surplus waste materials such as off-cuts from timber, tiles and bricks. Packaging and oversupply of materials will also contribute to waste during these phases.

3.2.1 Main C & D Waste Categories

The European Waste Codes (EWC) for typical waste materials expected to be generated during the construction of the proposed development are provided in Table 3.

Table No. 1 : Typical Waste Types and EWC Codes

Waste Material		
Waste Type	**Example**	**EWC Code**
Biodegradable Waste	Scrub, Vegetation	20 02 01
Bituminous Mixtures	Surfacing Materials , Asphalt	17 03 02
Cables	Electrical Wiring	17 04 11
Cardboard	Boxes, Cartons	15 01 01
Composite Packaging	Containers	15 01 05
Concrete	Surfacing, Flooring material	17 01 01
Insulation Materials	Fibreglass	17 06 04
Metals	Copper, Aluminium, Lead Iron & Steel	17 04 07
Mix of Inert Materials	Sand, stone, plaster, rock	17 01 07
Mixed Municipal Waste	Mixed Waste	20 03 01
Plastic	PVC Frames, Electrical Fittings	17 02 03
Plastic Packaging	Packaging with new materials	15 01 02
Soil & Stone	Overburden, Soil, Subsoil	17 05 04
Wood	Off cuts	17 02 01
Wooden Packaging	Boxes, Pallets	15 01 03

3.2.2 Potential Hazardous Waste Arising

Fuels used during the construction phase are classed as hazardous. It is anticipated that there will be some fuel stored on the site for machinery and construction vehicles. All fuel tanks and draw-off points will be bunded. If the fuel is correctly contained and bunded, it is not expected that there will be any fuel wastage at the site or related contamination of soil.

Waste mixtures on C & D sites can often contain dangerous substances classifying the material as hazardous waste. This material cannot be used as fill on sites even if a waste licence is held. Disposal can only be undertaken at a licensed hazardous waste facility.

Typical recyclable material which would be expected to be generated would be: timber, cut cable and cable tray, steel offcuts, cut aluminium sections, and piping offcuts.

Material generated which will need to be disposed of by landfill will likely include: waste cladding, waste insulation (e.g., rockwool, fibreglass etc.), gypboard offcuts, miscellaneous construction and domestic wastes.

Contractors will be required to supply separate labelled skips for plastic, cardboard packaging waste and other waste materials they generate themselves.

3.2.3 Staff Responsibility

Subcontractors will also be required to follow the site construction Waste Management Plan and will be advised of such at tender stage and pre-appointment meetings.

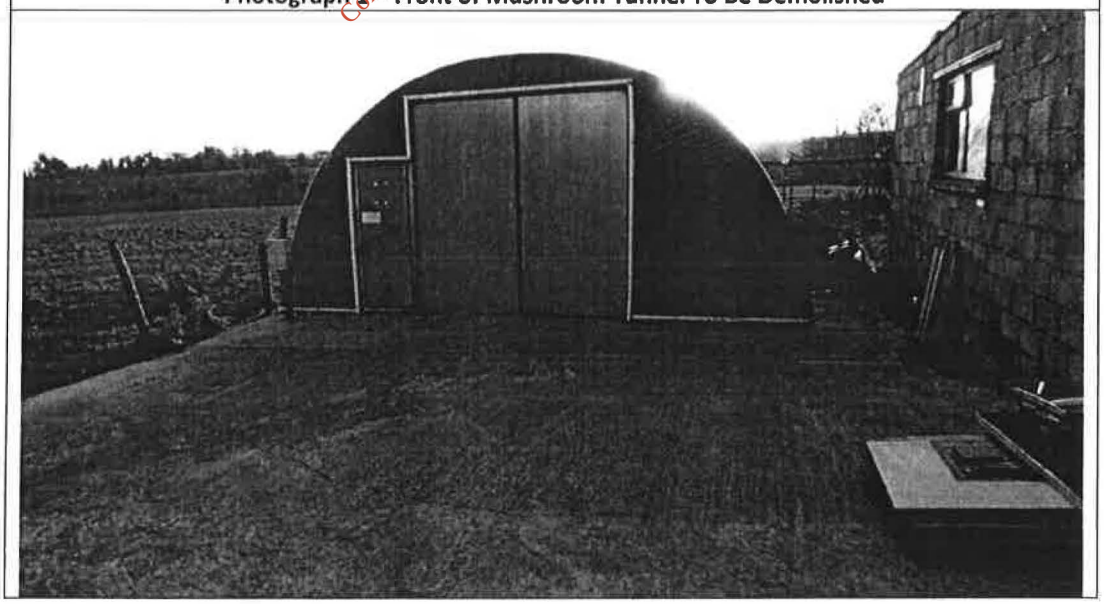
The regulation of this waste management and segregation will be overseen by the site agent and safety officers and all of the construction management team in general. Other wastes produced during the construction process include; soil, concrete, tar, bricks, tiles, plaster, masonry and wood. Waste disposal will be in accordance with all relevant regulatory requirements.

3.2.4 Local Authority

The Waste Management Section of Monaghan County Council will be consulted as required throughout the construction phase in order to ensure that all available waste reduction, re-use and recycling opportunities are identified and utilised. In addition, the local authority will be consulted when required under the relevant legislation.

Photographs of Proposed Mushroom Tunnel to Be Demolished

Photograph 1 – Front of Mushroom Tunnel To Be Demolished



Photograph 2 – Side view Of Mushroom Tunnel To be Demolished

4 PROPOSALS FOR MINIMISATION, REUSE AND RECYCLING OF C&D WASTE

The primary aim of this CDWMP is to ensure that the wastes generated in the course of the project are managed in a systematic manner in accordance with the governing Waste Management Legislation and the principle of the Waste Hierarchy.

Wastes generated on the construction site shall be identified and segregated according to their category as described by the European Waste Catalogue (EWC). In order to effect this, designated Waste Storage Areas (WSA's) will be created at the site for the storage of segregated wastes prior to transport for recovery/disposal at suitably licensed/permitted facilities. Employees will be made aware of the various waste streams arising from soft stripping and demolition and this will ensure that wastes will be segregated appropriately.

Under the Waste Management (Collection Permit) Regulations 2007 as amended a waste collection permit, for the appropriate EWC Code (s) and destinations, is required by waste hauliers to transport waste from one site to another. (See Appendix B Waste Collection Permit) Compliance with the Waste Management (Movement of Hazardous Waste) Regulations is also required for the transportation of hazardous waste by road. All Companies who will be used for transportation of waste from the site will be permitted. The export of waste from Ireland is subject to the requirements of the Waste Management (Shipment of Waste) Regulations, 2007. The Contractor will ensure that the transport and movement of all wastes are carried out in compliance with these requirements. Waste may only be treated or disposed of at facilities that are licensed to carry out that specific activity, for a specific waste type. Records of all waste movements and associated documentation will also be held, on-site.

5 ASSIGNMENT OF RESPONSIBILITIES

The site Foreman shall be designated as the C&D waste manager and have overall responsibility for the implementation or the Project CDWMP. The C&D waste manager will be assigned the authority to instruct all site personnel to comply with the specific provisions of the Plan. At the operational level, a foreman from the main contractor and foreman from each sub-contractor on the site shall be assigned the direct responsibility to ensure that the discrete operations stated in the CDWMP are performed on an on-going basis.

Other operatives as required will have safe pass, site induction and all other training as required by task. They will be briefed on the contents of this CDWMP, Safe Plan of Action and all associated permits. Additional details about staff structure, responsibilities and competency are included in the appendices. Employees working on this project must sign off that they have read the CDWMP.

5.1 Training

All site personnel and sub-contractors will be instructed about the objectives or the Waste Facility Permit and the CDWMP and informed of the responsibilities which fall upon them as a consequence of its provisions. Where source segregation, selective demolition and material reuse techniques apply, each member of staff will be given instructions on how to comply with the CDWMP. Staff meetings will be held to reinforce the key messages within the CDWMP. Site notices will also be displayed in prominently location through the site for the benefit of site staff.

The C&D Waste Manager assigned the responsibility for waste minimisation, reuse and recycling during the various stages of the Project has the overall task of implementing the objectives of the Project C&D Waste Management Plan. The on-site role will include the important activities of conducting waste checks/audits and adopting demolition methodology that is designed to facilitate maximum reuse and/or recycling of waste. Audit check sheets will be kept on site.

The C&D Waste Manager must be appropriately trained and assigned the authority to require measures to be taken to fulfill the Plan's objectives and targets for each stage of the project.

The role of the C&D Waste Manager will ensure that opportunities are taken to educate all colleagues (at the planning and design phases of the Project), site staff, including external contractors and suppliers, about alternatives to conventional construction waste disposal. In addition, copies of the final C&D WMP will be made available to all relevant personnel on site. Staff meetings will be held in the morning for 5 – 10mins to reinforce the key messages within the CDWMP and the Waste Facility Permit. Site notices will also be displayed in prominent locations throughout the site for the benefit of site staff.

The C&D Waste Manager will be trained in materials management thereby being in a position to:

- distinguish reusable materials from materials suitable for recycling;
- ensure maximum segregation at source;
- co-operate with site manager on the best locations for stockpiling reusable materials;
- separate materials for recovery;
- identify and liaise with operators of recovery outlets.

5.2 Waste Auditing

Details of the inputs of materials to the construction site and the outputs of wastage arising from the project will be investigated and recorded in a Waste Audit, which will identify the amount, nature and composition of the waste generated on the site. The waste Audit will examine the manner in which the waste is produced and will provide a commentary highlighting how management policies and practices may inherently contribute to the production of construction and demolition waste. The measured waste quantities will be used to quantify the, costs of management and disposal in a Waste Audit Report.

5.3 Waste Records

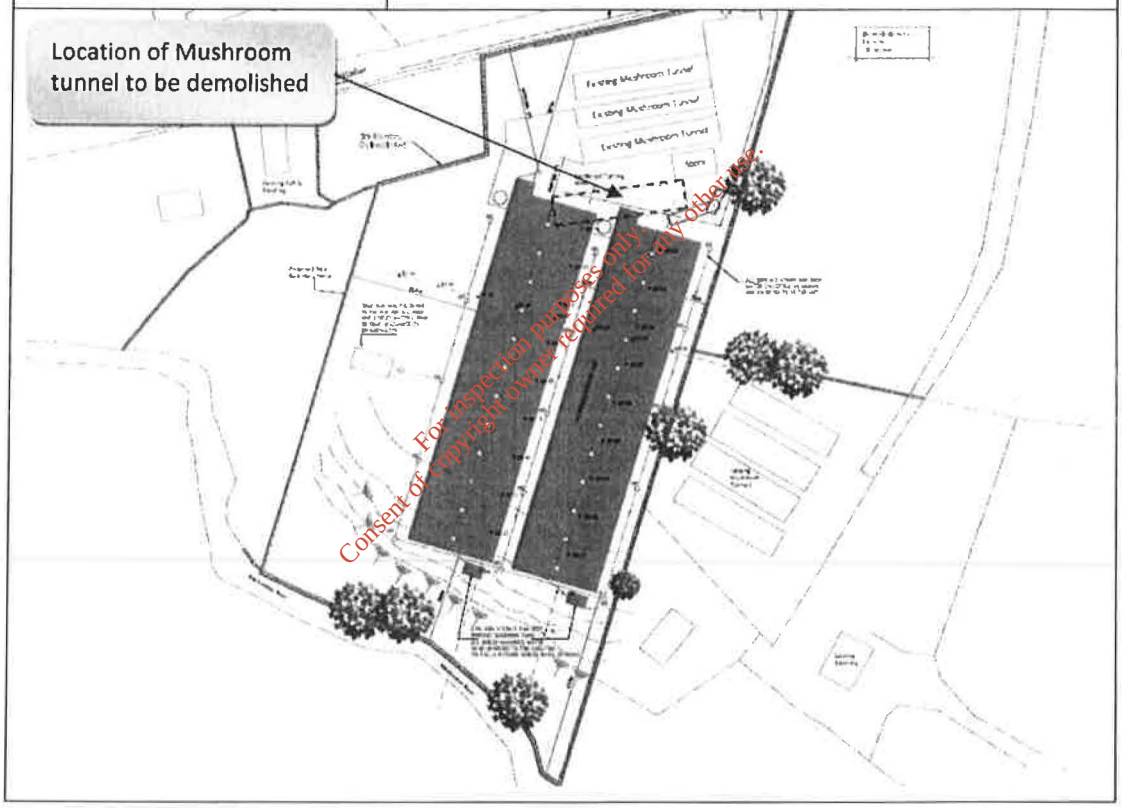
The C&D waste manager shall arrange for full details of all waste arisings, movements and infilling ops and treatment of C&D waste discards to be recorded during the demolition stage of the project. All materials being transferred from the site, whether for recycling or disposal will be subject to documentation tracking system which can be verified and validated. This system will conform to Table 3 below and ensure full traceability of the material to its final destination. Where possible and available computerised monitoring tools will be used for record keeping.

Table No. 3 Details to be included within Transportation Dockets

Details to be included within Transportation Dockets
Name of project of origin & Date
Material being transported
EWC Code
Quantity of material
Name of carrier (Waste Collection Permit No.)
Destination of material and Waste Facility Permit No
Recycled or landfilled.
Staff Members Signature on dockets

6.0 DEMOLITION PROCEDURES

Building	Mushroom Tunnel	
Description of Building	Size of Building	(33m long x 7m wide) sections
	Height	3m approx
Material Of Construction	Galvanized tubular steel frames, Polythene, Fibre glass, Concrete Floor, Doors are insulated galvanized panels with treated timber end frames	
Internal Materials of Construction	The base of the structure is concrete. The tunnel covering consists of fibre glass between layers of polythene, supported by tublar steel frames. Steel doors with timber frames.	
Other Materials of Construction	Plastic control panel, electrically wiring, and ventilation fan.	



Demolition Method for Mushroom Tunnel.

The works involve the removal of the existing mushroom tunnel to facilitate the installation of two new poultry units at Knockballyroney, Scotstown, Co. Monaghan.

The project will involve removal of all recyclable materials during the soft strip. This will be followed by careful removal of the polythene and fibre glass. The core supporting structure of galvanized tubular steel frames and concrete bas will be the final materials to be removed as part of the demolition. All concrete rubble will be crushed on site. The full demolition procedure is as

follows:

- Demolition shall proceed by a top down method, in which the outer polythene shall be removed before proceeding to the fiber glass.
- All loose timber including doors joists and chipboard will be removed prior to the main demolition.
- Only timber which it is not possible to remove, can be taken out by a grab and segregated outside of the building under the supervision of the C&D Waste Manager.
- Material will be loaded into a larger roll-on roll-off skip before being removed off site.
- Removal of the main roof structure including all timber purlins and steel trusses will take place.
- All concrete rubble will be crushed on site and used for roadways within the site road network.
- All materials during the demolition will be segregated and stored on site until removed.

Scope of Works

- All of the operatives have received awareness training for the removal of materials involved.
- A soft strip will be carried out on all areas of the building prior to main demolition works taking place as detailed above in the general demolition procedure.
- The contractor will ensure that anybody entering the site will be aware of the information contained in this method statement and all workers will be briefed.

Mushroom Tunnel Demolition Site set up

- An exclusion zone will be put in place before and during the removal works. Cones and warning tape will be erected around the working area. Warning signs (Keep out demolition works in Progress) will be erected at entry points around the working area. The site shall be set up and maintained in a safe and secure condition to prevent the entry of non site personnel on to the site during the demolition works. The work area and the surrounding areas will be set up and maintained in a manner which prevents any potential environmental impacts.

Mitigation Measures

In order to minimise the potential impacts from the proposed development on the aquatic environment the following mitigation measures will be implemented. These measures will ensure that contamination of surface water does not occur during normal and/or emergency conditions. The following have been consulted in the preparation of these measures:

- The Department of the Marine's guidelines to ensure the impact of construction work, including excavation, on the aquatic environment is minimised.
- The UK Department of the Environment's guidance regarding the approach to minimise the impacts of construction and operation of developments on the aquatic environment.
- The CIRIA guidance for the control of water pollution from construction sites.

Construction Phase

A number of mitigation measures will be put in place to prevent any significant contamination of surface waters(namely the Scotstown River) during the construction phase as follows;

- Settlement ponds will be used where necessary throughout the site to prevent sediment laden surface water runoff from the site to local surface waters.
- Raw or uncured waste concrete will be disposed of appropriately by removal from the site.
- Wash down water from exposed aggregate surfaces, cast-in-place concrete and from concrete trucks will be appropriately controlled on-site. Such controls may include collection to allow sediment to settle out and reach neutral pH before clarified water is released to the storm water drainage system.
- Materials which are hazardous to the environment such as fuels, hydraulic fluids and waste oils on site will be carefully handled and stored to avoid spillage according to existing site procedures. Appropriate spill containment will be provided as necessary to prevent contamination of surface waters. All waste generated on site which could potentially give rise to water pollution will be disposed of appropriately in accordance with the construction environmental management system and legal requirements.
- Maintenance and repair of all construction equipment including, fuelling and lubrication, will only be carried out in designated areas.
- Storage locations for excavated materials, equipment, hydrocarbons (including fuels for machinery) will be designated prior to commencement of works. Excavated materials will not be stored within 20m of any ditches, dry or wet, watercourses or wetland areas.
- Fuels, oils, greases and hydraulic fluids will be stored in bunded compounds well away from the surface water drains.
- All hydrocarbons must be stored within 110% bunded containers.
- Refuelling of machinery, will be carried out on hard surfaced designated areas where possible. In the event that refuelling is required outside of this area, fuel will

be transported in a mobile double skinned tank and a spill tray will be employed during re-fuelling operations.

- Machinery will not be serviced within the site.
- An adequate supply of spill kits and hydrocarbon adsorbent packs will be available throughout the site with all vehicles onsite carrying spill kits. All relevant personnel will be fully trained in the use of the equipment. Any used spill kits will be disposed of appropriately off-site.
- All concrete will be mixed off site and imported into the site where geosynthetic material will be placed to prevent concrete runoff entering the surface water.
- All mitigation measures put in place must be inspected daily during construction works.
- All works must follow the guidance set out in the CIRIA guidance note Control of Water Pollution from Construction Sites (CIRIA, 2001).